

# Chapter 7

## Summary and Policy Implications

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# Chapter 7

## Summary and Policy Implications

*Eiichi Kusano*

This publication sought ways to improve the agri-food producer's profitability by utilising the food value chain (FVC) through case studies in Thailand, Viet Nam, Malaysia, and Indonesia. Findings and suggestions are sprinkled throughout each of the previous chapters. This chapter extracts and reconstructs some essential policy implications from the case studies.

### **1. Increase in Productivity and Product Quality (Thailand, Fresh Fruits)**

To drive the transition from the traditional to the modern value chain corresponding to higher requirements of consumers and buyers, producers need to reduce production and marketing costs and ensure high-quality products through good farming practices. A growing demand for organic products would limit chemical inputs by farmers. The just-in-time or stable supply of agri-food products requires knowledge and production systems to minimise seasonal and yield variations. In addition, producers need to cope with the problems of a declining labour force and ascending labour costs.

#### **Devising Food Safety Rules Acceptable to All Stakeholders**

The most challenging issue is to devise the appropriate food safety rules or institutions and incentives that are acceptable to all stakeholders. Development and dissemination of the traceability system and documentation, which allow consumers and retailers to trace products back to the farm, would also contribute to overcoming a bottleneck in the export of agri-food products. Such rules should be enforced at reasonably low costs for all stakeholders in the FVC. Close cooperation among the government, the private sector, civil society organisations, and non-governmental organisations (NGOs) is required.

#### **Encouragement of Collective Actions or Horizontal Cooperation**

The collective action realised through community enterprises or cooperatives can share input costs, especially labour cost, within the FVC. That would be a major means for small-scale producers who do not have enough assets to respond to various issues arising from the transition of the FVC.

#### **Application of Modern Technologies**

New types of agri-food production and marketing based on modern digital technologies, such as precision farming and marketing utilising social media, would increase the level of automation and reduce input costs.

## **2. The Rise in Resilience against External Shocks (Thailand, Broiler)**

### **Quick Adaptation of Technologies and Strategies against External Shocks**

Companies should quickly adopt new technologies and maintain a tight control of information flowing within their companies to adapt to new requirements and changing consumer preferences on social, environmental, and animal welfare concerns.

Strategies such as a business-to-business linking foreign trading firms with a high-quality or made-to-order product and government-to-government negotiations to mend the broken trade links between nations can also be effective against trade disruptions.

### **Development of Mechanisms for Risk Sharing and Reduction against External Shocks**

Risk-sharing arrangements within the FVC would reduce farmers' risks of heavy debt and bankruptcy against serious external shocks, such as bird flu outbreaks. The government and the industry need to constantly monitor possibilities of such external shocks and establish an effective warning and preventive system.

### **Utilisation of Global Value Chain or Foreign Direct Investment**

The global value chain (GVC) can be actively utilised as one of the competitive strategies to be a winner in the intensifying international competition and to avoid risks of import restrictions. The approach of foreign direct investment (FDI) varies differently according to the local context, such as market preferences and local demands for the product, infrastructure readiness, local resource availability, and government policies and regulations.

Two approaches were observed in the case of the broiler industry in Thailand. First is the investment in feed businesses and employing local contract farmers to scale up production gradually at the same pace as local demand. Second, the investment decision into the more developed economy was in the direction of rapid growth through mergers and acquisitions.

## **3. Enhancement of Vertical Collaboration (Viet Nam, High-quality Rice and Milk)<sup>1</sup>**

### **Enhancement of the Functions of Marketing Actor or Buyer in the FVC**

Strengthening the marketing actor's functions in the FVC would increase value added and farmers' income. The case study of high-quality rice shows how the cooperative of paddy collectors<sup>2</sup> significantly contributed to the increase in value added through the exploration and quality control of the product.

- Intensive investment for research and development to realise higher-value products: The model cooperative of the paddy collectors, rather than concentrating on limited goods, has diverse commercial products, including white rice, brown rice, germ rice, and alcohol. The cooperative has also been exploring by-products which can potentially become commercial products with high value. Intensified investment in research and

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<sup>1</sup> The first three in the total of five policy recommendations are drawn from the study of the high-quality rice. The last two are summaries of the results of the study on fresh milk.

<sup>2</sup> Tien Phong Cooperative (TPC) in Batxat District, Lao Cai Province.

development is required to create new products and new features and to enhance the value of core products.<sup>3</sup>

- A wide range of intervention into the FVC to control the product quality: The model cooperative intervenes in whole stages of the FVC to control product quality, and not only collects products. For example, the cooperative has provided farmers all the inputs including certified seeds, helped reap and collect paddy, and invested in modern machinery systems for post-harvest processing. Those investments realised higher quality and productivity of rice as well as enhancing linkages in the FVC.

### **Support by Secondary Actors or Relevant Stakeholders Surrounding the FVC**

Secondary actors or relevant stakeholders not directly involved in the FVC, such as provincial government and non-government organisations (NGOs), can play important roles for poverty reduction, improvement of the livelihood of local people, and multifaceted rural development by intervening in the FVC.

- Industry promotion: Agri-food industries can be progressed through various services based on development plans and supporting programmes of the government. These include production zoning, management of agricultural inputs, provision of certified seeds, a subsidy of input costs, and dispatch of technical staff for technology transfer. Bodies responsible for industrial development can also support to promote agri-food industries by providing aid for agricultural machines, advertising products through regional festivals and showrooms, and creating training on business skills for local agricultural enterprises.
- Banking services: Formal financing suppliers must reduce the complexity of the procedures and improve the quality of credit assessment to select and fund potential customers while ensuring minimum payment risk. Many farmers are facing financing shortage, which leads to lower investment in agricultural production. However, according to the survey on high-quality rice, they could not access bank credit due to complicated documents and collaterals as banks required. The case study on fresh milk suggests that governments provide priority loans or funds to dairy farmers in order to create a good environment for developing the FVC.
- Other services: In the case of the fresh milk value chain in Viet Nam, a private dairy company in collaboration with an insurance agency introduced veterinary service for vaccination and disease management, and a scheme for dairy cow insurance and dairy price insurance as important services to stabilise the FVC.

### **Prevention of Illegal Actions by Technology Progress and Reform of Consciousness**

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<sup>3</sup> Such research can consider the possibility and appropriateness of the expansion of various products.

The case study in Viet Nam reported an illegal action, deliberately mixing ordinary types of rice with high-quality rice. Such action would be caused by under-exploitation of main products and by-products due to outdated processing technology and lack of innovation. Upgrading the current technology in processing and paying more attention to innovative higher-value products are recommended. Furthermore, increasing awareness of the long-term benefits of quality and customer service is necessary.

### **Encouragement of Vertical Linkages Beneficial to Farmers**

Results of the cost–benefit analysis show that farmers can benefit when they can manage production cost well, even if they cannot get high cash receipts. Thus, this study emphasises the importance of contracts between buyers and suppliers which can contribute to cost reduction and efficiency of farm management.

- Farmer’s contracts on purchasing inputs and selling outputs: The case study shows that input prices supplied by a milk company based on a contract is lower than those from various suppliers without contracts. Thus, although this suggestion would largely depend on the market condition, the contract between farmers and input suppliers can be beneficial to ensure the stable and affordable source of input goods, including feeds. A stable and sufficient supply of feeds would contribute to the production of higher quality milk.

The contract on purchasing raw milk by milk collectors would also stabilise the milk production of farmers in some cases. Such a contract would be necessary for farmers when the explicit coordination of dairy plants on the milk collectors is weak.<sup>4</sup>

- Technical support and training courses for farmers: Contracts containing technical support by input suppliers or buyers would benefit the farmers. Dairy plants of a company in Viet Nam provide training of technicians and farmers, analyse the quality of milk, hire land and farm buildings, manufacture concentrated feeds, provide technical and veterinary services, and guarantee credit to buy cattle.
- Support to enhance the bargaining power of farmers: Depending on the contract, farmers can just be price acceptors and are not able to impose or negotiate prices. In the study site in Viet Nam, the dairy plant also decides the location, policy, rights, benefits, and responsibilities of each side for the milk collection processes. Thus, support to enhance the bargaining power of farmers is necessary. Some dairy farmers in the study sites have linkages with the associations of local farmers and war veterans. Those organisations can support farmers in terms of financial concerns or market power.

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<sup>4</sup> The contract between dairy farmers and milk collectors is not essential when farmers have a contract with a dairy plant, which explicitly coordinates milk collectors.

#### **4. Expansion of Market Channels Particularly of Small-scale Producers (Malaysia, Milk)**

Many small-scale farmers and their labour shortage seem to essentially restrict the production of high-value goods according to the case study in Malaysia. Large-scale commercial farmers who profit with the volume of milk supply can minimise market risks and transaction costs through the contract with cooperatives or milk collection centres. However, small-scale farmers producing a limited volume of milk may not profit when they sell milk and its products in the formal market.

##### **Support to Small-scale Producers for Accessing Informal or Niche Markets**

Interventions to develop distribution channels in informal or niche markets, which offer higher prices for fresh milk, might benefit farmers. The results of the case study show that the ex-farm price of fresh milk is higher in informal markets, such as a consumer visiting a farm, temple, or house, than the formal market, namely, cooperatives or milk collection centres. Small-scale farmers are required to seek informal markets on their own, and that sacrifices time and money in managing farms. It would be helpful if the government formulate intervention strategies in assisting these farmers to establish contacts with informal markets.

##### **Development of Cold Chain System to Realise a Wider Distribution of Perishable Products**

Establishment of an efficient cold chain system, including transportation and storage for milk and dairy products, is crucial since most small-scale dairy farms are located in rural areas away from large consumer markets. An efficient cold chain system would enhance the marketing of perishable products to a wider distribution network. The case study also suggests better cold storage facilities to enable retail outlets to expand their market since they can drive to buy yoghurt from farmers, thus resulting in higher ex-farm prices.

#### **5. Improvement in Distribution and Production Systems to Fully Utilise Resources (Indonesia, Various Seafood)**

##### **Improvement in the Distribution System to Circulate Fresh or Live Products**

Value addition to seafood highly relates to processing and distribution technologies and systems. The case study in Indonesia repeatedly mentions the need for the cold chain system in the entire FVC – from handling in the fishing boat, landing, processing, to distributing and keeping the freshness and better hygiene of the products. Improved technologies are also needed to ensure a high survival rate from capture to distribution of live lobster and many live maricultural products such as grouper, which are sold at high prices.

### **Appropriate Conservation and Full Utilisation of Fishery Resources**

Resource management to enable sustainable production is a problem specific to capture fishery. The case study suggests the importance of investment for production resources, technology development, and sufficient consideration of policies to fully utilise and save resources.

- **Investment for infrastructure and human capital to access potential fishery resources:** The case study suggests the potential to expand offshore fishery while fishery resources in the coastal area, where Indonesian vessels mainly operate, show a declining trend. Offshore fishery requires investment in large-scale fishing ports with modern equipment and human capital to introduce vessels with medium to large capacities.
- **Research and development for improving fishing and aquaculture technologies:** Environment-friendly fishing technologies or capturing techniques are needed, as mentioned in the case study on anchovies fishery. Similarly, the development of aquaculture would reduce overfishing, which lags behind capture fishery in the case of lobster production in Indonesia. The aquaculture of lobster needs to start with initial steps, such as research and development of hatchery. In terms of mariculture, particularly seaweed culture, a seedling system and centre that can produce good quality and superior seeds are necessary to improve seed quality and prevent diseases.
- **Reassessment of regulation policies for conservation and management of marine resources:** Various policies to conserve marine resources, such as regulations on specific fishing, fishing method, and selling, have been implemented in Indonesia in recent years. Two issues are stressed in the case study: one is the drop in the production of capture fishery and deficiency of locally supplied raw materials for the processing industry, and another is the relaxing of the regulation. Careful reassessment of current policies, including their scientific foundation, may be required to avoid the over-suppression of the local economy and the loss of substance of the regulation.

We should not easily generalise policy implications without careful consideration since the study sites and target items vary and are limited. Despite that, our study sheds light on obstacles for developing the FVC, which more or less exist in many ASEAN member states. It further provides ideas to solve that. Our study outputs are expected to serve as a clue to deeper arguments, and to contribute to improving the FVC and profitability of agri-food producers in ASEAN.