

## Strategic Models for Enhancing Production Capacity, Marketing, and Farmer Networks to Create Added Value for Organic Vegetable Community Enterprises in Chiang Mai Province

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### Abstracts

This research aims to: 1) Analyze the environment and potential for production, marketing, and farmer networks of community enterprises growing organic vegetables in Chiang Mai province; 2) Develop strategic models for enhancing the production, marketing, and farmer network capabilities to add value to the community enterprises of organic vegetable growers in Chiang Mai. The research employed a qualitative methodology through in-depth interviews and focus group discussions. The target group comprised 1) leaders of community enterprise groups, 2) committee members of community enterprise groups, and 3) representatives of community enterprise group members, totaling 75 participants. The findings are presented in a descriptive form.

The study revealed that: 1) The analysis of production, marketing, and farmer networks to add value to the community enterprises of organic vegetable growers in Chiang Mai used multiple aspects of analysis, including organizational structure, community enterprise members, resources, and support from government and network organizations. The findings showed that the community enterprise groups had strengths in their effective management structures but lacked clearly defined organizational values and culture, and were also deficient in technology for product preservation, as well as temperature-controlled transportation. However, they received strong support from the government, allowing the groups to collaborate with government bodies and academic institutions to enhance their production and marketing potential. 2) The analysis of strategies that could be used to develop capabilities categorized strategies into four

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main areas: organizational structure, community enterprise members, resources, and support from government and network organizations. Each area utilized proactive, corrective, preventive, and reactive strategies to strengthen operations and cope with various factors affecting the development of the community enterprises. Furthermore, the development of flexible production systems, the promotion of digital skills, and the creation of partnerships with the private sector are crucial factors for enhancing the sustainability of community enterprises in the future.

**Keywords:** Development Strategy; Marketing and Agricultural Network; Organic Vegetable Community Enterprises

## Introduction

Currently, the trend of health-conscious consumption and the demand for organic agricultural products have been steadily increasing both domestically and internationally (Camanzi, et al., 2024). As a result, organic farming has become a key alternative for developing the grassroots economy and improving farmers' quality of life (Marsden & Smith, 2005). This is particularly evident in Chiang Mai, one of Thailand's key regions with high potential for organic vegetable production due to its favorable climate and abundant resources (Suirmatee, et al., 2022). However, the development of organic agriculture to achieve market competitiveness and sustainable growth remains a significant challenge that requires a systematic approach.

The community enterprise groups of organic vegetable farmers in Chiang Mai serve as an example of agricultural cooperatives aimed at ensuring economic stability and adding value to organic agricultural products (Maneetorn, 2024). However, these groups continue to face multiple challenges, including production capacity, which requires further development to meet international standards and enhance efficiency; marketing capacity, which remains limited in terms of market access and brand development; and networking capacity, which requires greater support and collaboration from various sectors to strengthen the community enterprise groups (Sopolapikul, et al., 2024). Despite Chiang Mai's advantages in terms of natural resources and a high demand for organic agricultural products, a significant obstacle persists - the lack of a systematic and sustainable development

strategy. Many farmers still lack knowledge and modern techniques required to align their production with international organic standards. Additionally, farm management and cost control remain unstructured, resulting in inconsistent product quality. At the same time, market access remains a critical challenge, as many farmers rely on middlemen, preventing them from setting their own prices and directly impacting their income (Phaengsrisarn, et al., 2024). Furthermore, collaboration between the government, private sector, and civil society has yet to be sufficiently integrated, leading to inefficiencies in the promotion and support of organic farming. Therefore, developing the capacity of organic vegetable farming community enterprises to achieve sustainable growth necessitates a comprehensive development approach that encompasses enhancing production capabilities, strengthening marketing strategies, and fostering collaborative networks. This study focuses on exploring strategic development models for improving the capacity of community enterprise groups in Chiang Mai, with the goal of identifying practical and applicable solutions. The research emphasizes value-added product development, diversification of distribution channels, and enhanced cooperation among relevant stakeholders to ensure the long-term sustainability of organic farming enterprises.

As previously mentioned, the researcher anticipates that this study will contribute to the development of strategies that enhance the capabilities of farmer groups, enabling them to manage production more efficiently, expand market access, and establish strong collaborative networks to support the long-term growth of community enterprises. Furthermore, the study aims to promote stable incomes for farmers, reduce dependence on intermediaries, and strengthen their competitiveness in the market sustainably. Ultimately, these efforts will contribute to the steady and effective growth of Thailand's organic agriculture sector in the future.

## **Research Objectives**

1. To analyze the environment and the production, marketing, and farmer network potential of the organic vegetable farming community enterprises in Chiang Mai Province.

2. To examine strategic models for enhancing production capacity, marketing, and farmer networks to create added value for the organic vegetable farming community enterprises in Chiang Mai Province.

## Research Methodology

This study employs a participatory action research approach, driven by the action learning process, which emphasizes collaborative learning through practice. It integrates both quantitative and qualitative research methods to ensure a comprehensive understanding of the subject matter. The research process consists of the following steps:

**1. Population and Sample Groups:** The study's population consisted of 15 community enterprise groups of organic vegetable growers in Chiang Mai, each registered as a community enterprise for over 5 years, with a total membership of 1,215 individuals. The sample for interviews was selected based on the following criteria: 1) Community Enterprise Group Chairperson: 1 per group, totaling 15 individuals, 2) Community Enterprise Group Board Members: 2 per group, totaling 30 individuals, 3) Representative Members of the Community Enterprise Group: 2 per group, totaling 30 individuals. Therefore, the total sample size for data collection was 75 individuals.

**2. Research Tools:** The tools used in this study include in-depth interviews and focus group discussions, which were designed to collect data on the production, marketing, and network capabilities of the community-based organic vegetable growers in Chiang Mai Province. The tools were content-validated by experts and the reliability of the questionnaires was tested to ensure that the collected data was credible.

**3. Data Collection:** The researcher employed a qualitative data collection process by conducting in-depth interviews with enterprise group executives, community leaders, and relevant agencies. This approach was used to gain detailed insights into the strategies for enhancing the capacity of the enterprise group

**4. Data Analysis:** To ensure accurate data that can be practically applied in strategy development, the data analysis will be conducted in three main steps: 4.1 Analysis of Internal and External Environment: A SWOT analysis will be used to identify the strengths, weaknesses, opportunities, and threats of the

community enterprise group. 4.2 TOWS Matrix Analysis: This method involves pairing external factors with internal factors obtained from the SWOT analysis to develop appropriate strategies, which include: 1) Proactive Strategy (SO Strategy): Leveraging strengths to maximize opportunities. 2) Corrective Strategy (WO Strategy): Addressing weaknesses to take advantage of available opportunities. 3) Defensive Strategy (ST Strategy): Using strengths to mitigate the impact of threats. 4) Reactive Strategy (WT Strategy): Reducing weaknesses and preparing to cope with potential threats. 4.3 Synthesis and Presentation of Development Approaches: The data obtained from the analysis will be synthesized into concrete approaches to recommend methods for developing the production, marketing, and networking capabilities of the community enterprise group to create sustainable value.

## Results

The researcher conducted a study on "Strategic Models for Enhancing Production Capacity, Marketing, and Farmer Networks to Create Added Value for Organic Vegetable Community Enterprises in Chiang Mai Province" and the findings can be summarized according to the objectives as follows:

1. An analysis of the production potential, marketing, and agricultural network environment of the organic vegetable community enterprises in Chiang Mai Province was conducted using a SWOT framework. This analysis encompassed the aspects of organizational structure, community enterprise members, resources, and support from the government and network organizations. The results of the analysis are as follows:

- 1.1 Organizational Structure:** The community enterprise group has strengths in its efficient management structure, with an open working environment that encourages member input. The group also has standardized greenhouses and water management systems. However, there is a lack of clearly defined organizational values and culture, as well as an unsystematic approach to financial risk management. The group can leverage these strengths to further develop its production and marketing strategies while also finding ways to cope with climate change and market competition.

- 1.2 Community Enterprise Members:** The members of the group possess strong teamwork and experience, but most of them are elderly and face limitations in using digital technology. The group can leverage the experience of its

members to transfer knowledge to younger farmers, while also taking advantage of opportunities to develop knowledge and skills through government support to enhance production efficiency and reduce labor reliance.

**1.3 Resources:** The group has a standardized infrastructure and a stable internal revolving fund; however, it still lacks technology for product preservation and processing, as well as a temperature-controlled transportation system. The group should leverage these strengths along with opportunities for government support to develop the necessary technologies and improve production and transportation efficiency.

**1.4 Support from the Government and Network Organizations:** The group has received strong support from the government in terms of knowledge, technology, and funding. However, support from the private sector remains limited. The group should utilize collaboration with the government and academic institutions to enhance production and marketing capabilities, while also seeking partnerships with the private sector to strengthen their position and mitigate the impact of policy changes.

2. Analyze the strategic models for developing production capacity, marketing, and farmer networks to create added value for the community enterprise group of organic vegetable growers in Chiang Mai Province. Based on interviews and focus group discussions, the analysis can be framed as follows:

Organizational Structure Strategy	Elucidation
Proactive Strategy (SO)	Leverage a robust management system and standardized infrastructure, in conjunction with government support and collaboration with academic institutions, to develop a comprehensive production and marketing system.
Corrective Strategy (WO)	Integrate technology and innovation from supporting agencies to enhance risk management systems, establish a recognition and reward system for members, and define clear organizational values and culture.
Preventive Strategy (ST)	Maximize the efficient utilization of infrastructure, foster collaboration with the private sector, and develop a flexible management system capable of adapting to change.
Defensive Strategy (WT)	Develop a knowledge management system, improve management efficiency, and build a collaborative network among members to reduce external dependence and strengthen the group.

<b>Community Enterprise Membership Strategy</b>	<b>Elucidation</b>
Proactive Strategy (SO)	Utilize the experience of members in conjunction with government support to develop products and standards, create knowledge transfer systems through networks, and enhance skills in marketing and management.
Corrective Strategy (WO)	Develop digital technology skills, motivate young farmers, and enhance knowledge of organic agriculture standards through collaboration with academic institutions.
Preventive Strategy (ST)	Develop a production system that is suitable for labor and health constraints, establish a mutual support system, and develop skills for adapting to changes.
Defensive Strategy (WT)	Establish a work system that is suitable for elderly members, develop a welfare and healthcare system, and foster collaboration in resource sharing.
<b>Resource Strategy</b>	<b>Elucidation</b>
Proactive Strategy (SO)	Utilize the existing infrastructure, including sorting and packaging facilities and seedling cultivation areas, to develop a comprehensive production system, elevate standards, and establish a model learning center.
Corrective Strategy (WO)	Develop a post-harvest management system and temperature-controlled transportation by utilizing information technology in the management process.
Preventive Strategy (ST)	Create a system for shared resource utilization, develop self-reliant production processes, and establish a resource reserve system.
Defensive Strategy (WT)	Create resilience and stability through the establishment of seed banks, sharing of tools, self-production of production factors, and the creation of resource reserve systems to support crises.
<b>Strategy for Support from the Government and Network Organizations</b>	<b>Elucidation</b>
Proactive Strategy (SO)	Utilize collaboration with educational institutions, develop product standards, integrate networks, expand production and marketing, allocate budget, and develop infrastructure.
Corrective Strategy (WO)	Foster collaboration with the private sector through supportive policies, develop a monitoring and evaluation system based on organic farming standards, and plan for the continuous development of members' capabilities.

Preventive Strategy (ST)	Utilize a strong network to cope with policy changes, integrate projects to reduce duplication, and develop an efficient budget management system.
Defensive Strategy (WT)	Establish a coordination mechanism between agencies, develop a monitoring and evaluation system for standards, and increase private sector participation while reducing reliance on government funding.

Table 1 Strategic Model Analysis for Enhancing Production Capacity, Marketing, and Farmer Networks to Add Value to Organic Vegetable Community Enterprises in Chiang Mai Province

## Discussion

Based on the research study entitled "Strategic Models for Enhancing Production Capacity, Marketing, and Farmer Networks to Create Added Value for Organic Vegetable Community Enterprises in Chiang Mai Province," the following issues are raised for discussion:

1. The research findings on organizational structure indicate that the strategy adopted is comprehensive and effective for organizational development. The proactive strategy leverages the strengths of a solid management system and standardized infrastructure, along with government support to enhance the production system. This approach allows the organization to build on its existing strengths while utilizing external resources, improving production capacity, and ensuring long-term sustainability. Government support plays a key role in developing a complete production process, which is essential for meeting market demands and boosting competitiveness. This aligns with Pounpunwong's (2024) research, highlighting that a well-integrated production system is critical for the success of organic agricultural community enterprises. The corrective strategy focuses on using technology to build risk management systems and cultivate organizational culture, capitalizing on government and collaborative network support to address weaknesses. The preventive strategy maximizes the use of existing infrastructure and forms partnerships with the private sector to mitigate external challenges. Lastly, the defensive strategy emphasizes knowledge management and collaborative networks to strengthen the organization. This approach is in line with Phiwphun and Kobamrung's (2023) research, which shows

that combining all four strategies enhances the sustainable competitiveness of community enterprises.

2. Community Enterprise Membership Strategy; The research shows that the proactive strategy leverages the members' experience and government support for product development and knowledge transfer. This outcome is due to the practical farming experience of members, which strengthens product quality, and the government's role in providing resources, training, and infrastructure. The knowledge transfer system ensures that skills and technologies are shared, fostering innovation and long-term growth in the community enterprise. Consistent with Soonthonsmai, et al. (2022), this strategy creates a competitive edge and sustainability. The corrective strategy focuses on enhancing digital skills and organic farming standards, while motivating younger farmers. The preventive strategy develops production systems tailored to labor limitations and promotes member cooperation. This aligns with Chittanurak (2024), emphasizing sustainable human resource development, particularly digital skills and preparing the next generation of farmers. The defensive strategy addresses elderly members' needs by improving work and welfare systems and encourages resource-sharing to adapt to labor and technological challenges.

3. Resource Strategy; The research findings show that, in terms of resources, the proactive strategy capitalized on existing infrastructure, such as packing houses and seedling areas, to develop an integrated production system and learning center. This approach worked because the community enterprises already had key facilities in place, enabling them to improve production efficiency and create a sustainable learning hub for farmers. In line with Baedcharoen, et al. (2022), integrated resource management was found to be a key factor in the success of community enterprises, particularly in utilizing infrastructure strengths like packing houses and seedling production areas. The corrective strategy focused on developing post-harvest management systems and temperature-controlled transportation, aligning with Pimonrattanakan (2020), who emphasized the importance of post-harvest technology in maintaining product quality and extending shelf life. Preventive and defensive strategies focused on sustainability through shared resource use systems, self-reliance, and resilience in resource management.

4. Strategy for Government and Network Support: The research highlights that government support and network organizations play a crucial role in enhancing the capabilities of community enterprises. The proactive strategy emphasizes collaboration with educational institutions and government funding to improve infrastructure and standards. This strong financial and policy support allows enterprises to invest in development, while partnerships with academic institutions foster innovation and knowledge transfer, boosting production and marketing capacities. These factors have significantly contributed to increasing the added value and sustainability of organic vegetable enterprises in Chiang Mai. Supporting the findings of Janpet (2023), the research suggests that collaboration among network partners enhances production potential and competitiveness, particularly through developing production standards, R&D, and technology transfer. The corrective strategy focuses on increasing the private sector's involvement and improving monitoring and evaluation systems. Meanwhile, the preventive strategy promotes using a strong network to adapt to policy changes and manage budgets effectively. In line with Tahom, et al. (2021), the research emphasizes reducing dependence on government budgets by encouraging private sector participation, especially in marketing, branding, and consumer engagement. The defensive strategy centers on creating coordination mechanisms and minimizing reliance on government funds, thus ensuring the long-term sustainability of community enterprises.

### **New Knowledge**

Based on the research study on "Strategic Models for Enhancing Production Capacity, Marketing, and Farmer Networks to Create Added Value for Organic Vegetable Community Enterprises in Chiang Mai Province" the researcher has developed a structured development process and gained new knowledge, as illustrated in the following diagram.

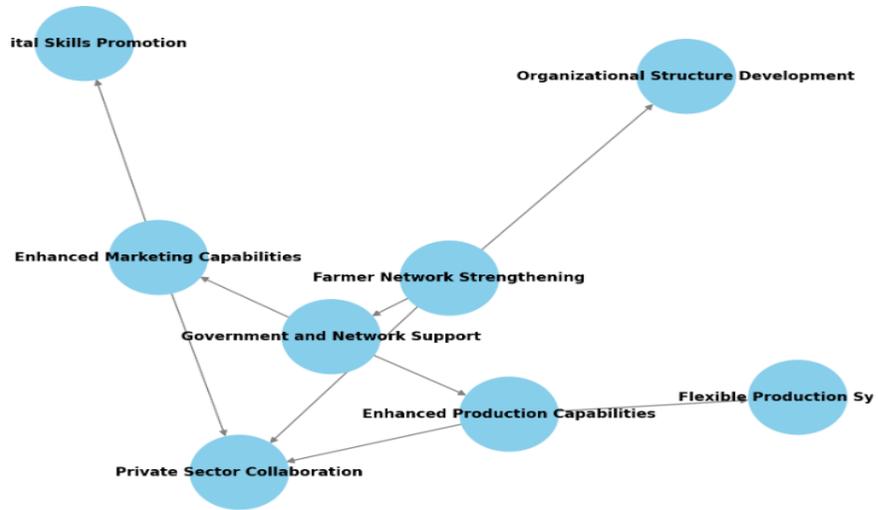


Figure 2 New Knowledge

The diagram above synthesizes the new knowledge gained from the research on developing the production, marketing, and networking capabilities of organic vegetable farmers in Chiang Mai. The key elements identified in the research have been organized into a model that shows the relationships between different factors contributing to the success and sustainability of the community enterprise. Key Insights and New Knowledge: 1) Enhanced Production Capabilities: This is achieved by adopting flexible production systems that can adapt to market needs and seasonal changes, making the farming process more efficient and adaptable. 2) Enhanced Marketing Capabilities: This aspect is strengthened through the promotion of digital skills, enabling farmers to market their products more effectively using digital tools and platforms. 3) Farmer Network Strengthening: Building a strong network of farmers is crucial, and this requires improving the organizational structure of the community enterprise. It also involves forming collaborations with government and other networks to ensure better resources and support. 4) Government and Network Support: Government support plays a vital role in facilitating the production and marketing capabilities of the community enterprise. This partnership helps provide financial resources, training, and access to new markets. 5) Private Sector Collaboration: Collaboration with the private sector is key to improving production and marketing outcomes. This allows farmers to access resources, technology, and expertise, creating more sustainable pathways for growth.

## Conclusion and Suggestion

Research Summary, This study analyzes the production, marketing, and agricultural network potential of organic vegetable community enterprises in Chiang Mai to enhance product value. The findings indicate that these enterprises have a strong management structure and receive significant support from the government. However, they lack clearly defined organizational values and culture, as well as advanced storage and temperature-controlled transportation technologies. The development strategy is categorized into four key areas: organizational structure, community enterprise members, resources, and support from the government and networks. The study suggests proactive, corrective, preventive, and adaptive strategies to strengthen operations. Enhancing flexible production systems, promoting digital skills, and fostering collaboration with the private sector are crucial factors for ensuring the long-term sustainability of these community enterprises. Therefore, the researcher has formulated recommendations based on the study, including policy recommendations, practical recommendations, and suggestions for future research.

### 1. Policy Recommendations

1.1 Financial and Technological Support: The government should provide targeted funding for developing storage and logistics technology to extend the shelf life of organic vegetables.

1.2 Infrastructure Investment in Logistics: Investing in cold-chain logistics systems to improve product distribution efficiency.

1.3 Developing Local and National Organic Certification Standards: Encouraging standardized organic certification to enhance market competitiveness.

### 2. Practical Recommendations

2.1 Enhancing Digital Skills for Members, Providing training in online marketing, social media, and e-commerce to improve sales opportunities.

2.2 Strengthening Partnerships with Private and Academic Sectors, Collaborating with universities and businesses to develop production innovations and expand market reach.

2.3 Improving Flexible Production Processes, Implementing precision agriculture and other advanced techniques to increase efficiency and reduce costs.

### 3. Future Research Recommendations

3.1 Feasibility Study on Organic Agricultural Logistics Systems Analyzing cost and best practices for implementing temperature-controlled logistics.

3.2 Consumer Behavior Analysis on Organic Vegetables Identifying consumer preferences and purchase motivations to develop effective marketing strategies.

3.3 Case Study Comparisons of Successful Community Enterprises – Investigating best practices from successful enterprises to create development models.

### References

- Baedcharoen, I., Aksorntap, A. and Jatuprayoon, C. (2022). Success factors of managing the Gold Color Longan Flesh Processing Community Enterprise Management in Ban Thi Sub-District, Ban Thi, Lamphun Province. *Payap University Journal*, 32(2), 82–98.
- Camanzi, L., Ahmadi Kaliji, S., Prospero, P., Collewet, L., El Khechen, R., Michailidis, A. C., and Francescone, M. (2024). Value seeking, health-conscious or sustainability-concerned? Profiling fruit and vegetable consumers in Euro-Mediterranean countries. *British Food Journal*, 126(13), 303-331.
- Chittanurak, J., Suyaprom, S. and Suklueang, K. (2024). Buddhadhamma Integration for Human Resource Development of the Securities and Exchange Commission (SEC). *Journal of Interdisciplinary Innovation Review*. 70(5), 335-347.
- Janpet, J. (2023). Feasibility guidelines study of business network to develop the potential of safe vegetable farmers group, Lom Sak district, Phetchabun province in Chachoengsao province. *Valaya Alongkorn Review*, 13(3), 206-218.
- Maneetorn, P. (2024). Value addition techniques for Chiang Da herbal community products of Setthee Rueathong Organic Farming Community Enterprise Group, Mae Taeng District, Chiang Mai Province. *Panyapiwat Journal*, 16(2), 16-32.
- Marsden, T. and Smith, E. (2005). Ecological entrepreneurship: sustainable development in local communities through quality food production and local branding. *Geoforum*, 36(4), 440-451.

- Phaengsrisarn, N., Maithongdee, N., Nakabhop, C., Watcharasorn, W. and Singthongchai, M. (2024). Economic Value and Competitiveness of Jasmine Growers in Kao Liao District, Nakhon Sawan Province. *Journal of Academic for Public and Private Management*, 6(2), 48-62.
- Phiwphun, K. and Kobamrung, P., (2023). Analysis of the Causal Relationship Path Influencing Local Economic Capital Development Approached for Enhancing the Capacity of Community Enterprise Entrepreneurs in the Lower Northern Region of Thailand. *Journal of SaengKhomKham Buddhist Studies*, 8(2), 260-281.
- Pimonrattanakan, S. (2020). The increasing potential competition, value-added and innovation management of agricultural products, mangoes for export in Chachoengsao Province. *Southeast Bangkok Journal*, 7 (1), 41-54.
- Pounpunwong, W. (2024). Phitsanulok: Herbal City: Extracting Lessons from the Community Enterprise of Cultivating and Processing Tuberose Herbal Medicine, Phrom Phiram District, Phitsanulok Province. *Journal of Graduate Studies Valaya Alongkorn Rajabhat University*, 18(3), 159-176.
- Soonthonsmai, V., Pitichareanporn, V., Silaparattanaporn, W. and Piluk, P. (2022). Causal Relationship Model of Digital Marketing Efficiency with Marketing Orientation, Strategies, and Innovative Behavior of SMEs in Processed Agriculture food products. *Burapha Journal of Business Management, Burapha University*, 12(1), 119-139.
- Sopolapikul, R., Siriwattana, S. and Fongtanakit, R. (2024). Guidelines for strengthening community enterprises in Nakhon Nayok province, Thailand. *Procedia of Multidisciplinary Research*, 2(12), 1-18.
- Suirmatee, P., Vititsasanatorn, P., Larping, U., Samphanthano, P. and Phromlee, S. (2022). Capacity development and enhancement of the community enterprise for organic coffee farmers in mountain areas based on the King's philosophy in Ban Khun Maeyod, Chiang Mai Province. *Journal of Buddhist Anthropology*, 7(10), 59-71.
- Tahom, U. Otaram, T. and Kodram, U. (2019). Guidelines in participatory development of Ban Bua chili paste group's products in Ban Bua sub-district, Muang district, Buriram province. *Ramkhamhaeng University Journal Humanities Edition*, 38 (1), 19-42.