Farmers’ perception of rice production community enterprise’s roles: evidence from Chachoengsao Province, Thailand

H J Cavite* and S Suwanmaneepong
Faculty of Agricultural Technology, King Mongkut’s Institute of Technology Ladkrabang, Bangkok, Thailand

harryjaycavite@gmail.com

Abstract. Rice production community enterprises (RPCEs) have emerged in Thailand as a group initiative supported by the government to help address the challenges of rice farmers in rural areas. However, farmers still faced problems due to a lack of targeted programs and policies to improve the enterprise’s roles in the community. This study investigated farmer-members’ perception of an RPCE’s specific roles. Primary data were collected through a structured questionnaire administered to 201 farmers in Sanam Chai Khet District, Chachoengsao Province, Thailand. Data were analyzed using the weighted average index (WAI) method to assess the farmers’ perception of the RPCE’s roles. Results reveal that RPCE members have a strong perception of the enterprise’s role in increasing their income. Other roles such as knowledge and skills improvement, supplying inputs at a fair price, increasing social network, product competition with rivals, and provision of credit facilities, were rated as medium, demonstrating the considerable efforts exerted by RPCEs to improving its members. Moreover, a weak rating was given by members for the enterprise’s role as a saving source implying that government should further intensify its support for RPCEs in terms of promoting the saving behavior among members. This study suggests that stronger policy support should be given to upgrade RPCEs based on how members perceived them. This would encourage more member participation and secure more benefits and income for members of the community enterprise.

1. Introduction
Rice production community enterprises (RPCEs) have emerged in Thailand as a group initiative supported by the government to help address the challenges of rice farmers in rural areas [1]. The issuance of the ‘CEs Promotion Act of 2005’ has made RPCEs and other farmer groups become legal entities [2]. Initially recognized as micro-enterprises, RPCEs’ main role focuses on selling products mainly for the community and its members. Later on, these RPCEs have expanded their reach through linkages with neighboring farmers, which also opened the opportunity for them to deliver products to customers outside of their area. They also gained more access to supports from the government and private organizations [3]. These roles of RPCEs have supported farmers raise their income level and improve their livelihood.

As small farmer organizations, they are not exempt from various problems. Previous studies have shown that most problems faced by the community enterprises are management-related such as lack of organizational skills of leaders [4], no clear member benefits, and inadequate technical skills of members [5]. These problems put a negative image on the community enterprises, making other farmers hesitant
to join and unable to access membership benefits. This could be avoided if there is a good understanding of farmers’ behavior towards the community enterprise. Farmers’ behaviors are based on their perception, and a lack of understanding of farmers’ perception results in gaps of how they will be served better [6,7]. However, only a few studies have assessed farmers’ perceptions of RPCEs [2]. A research on this area can provide important information for policymakers and enterprise managers on how they can provide better benefits to its members, consequently improving farmers’ livelihoods.

Hence, this study aims to investigate farmers’ perceptions of RPCE’s role. This is based on a face-to-face survey of farmer-members in Chachoengsao Province, Thailand. This study’s findings will guide policymakers and enterprise leaders in developing targeted programs and policies aimed at upgrading the enterprise’s role in the community. This would encourage more member participation and secure more benefits and income for members of the community enterprise.

2. Materials and methods

2.1. Study area
Chachoengsao Province was chosen for this study. It is located in the central region of Thailand, the country’s major area for commercial rice production [2]. This region has the largest share in farm household income from rice production and also one of the homes of many community enterprises in Thailand.

2.2. Population and sample size
Purposive sampling was employed to select the farmer-respondents for data collection. This study focused on two RPCEs in the study area. A face-to-face survey was conducted in February to March 2021 among farmers of the selected community enterprise. A total of 201 farmers were interviewed using a structured questionnaire.

2.3 Data collection
The survey questionnaire was structured into two parts. The first part gathered the socio-demographic profile of farmers. The second part consisted of items that measured their perception about their membership in the RPCE (i.e., source of savings, supplying farm inputs, knowledge and skills improvement, increasing social network, increasing income, product competition, provision of credit). These items were adopted from the recent study of Petcho, et al. [2]. Each of these items was rated by farmers using a five-point scaling system from 1 (very weak) to 5 (very strong) [2].

2.4. Data analysis and interpretation
Data analysis was done using SPSS v.26.0.0 software. Descriptive statistics (means and percentages) were used to analyze the socio-demographic profile of farmers. To assess the perception of farmers towards the RPCE’s roles, this study employed the weighted average index method (WAI). This method has been widely used in several studies in examining farmers’ perceptions and their associated decision-making [2, 8, 9]. The formula is presented below:

\[
WAI = \sum \frac{F_iS_i}{N}
\]

In the formula, \(F_i\) is the frequency of responses of each scale rating, while the \(S_i\) is the assigned value or weight of each scale rating. This study adapted the weight values assigned by Petcho, et al. [2], 1.00 for very strong, 0.75 for strong, 0.50 for medium, 0.25 for weak, 0.00 for very weak. Results were interpreted according to their computed WAI value.

3. Results and discussion

3.1. Farmers’ socio-demographic profile
The socio-demographic profile of farmers is shown in Table 1. Farmers’ mean age was 57 years, and most of them are female. In terms of educational attainment, most of the farmers are educated to primary level (75%), while only a few of them have bachelor’s degrees (1.5%) and vocational certificates (1%). The average rice farming experience is 30 years. Farmers had a mean farm size of 14.54 rai (or 2.33 ha),
where a majority of them are owned (76.6%). The average rice yield was at 384.03 kg/rai (or 2,400.19 kg/ha)

Table 1. Socio-demographic profile of farmers.

| Socio-demographic characteristic | Category       | Frequency | %  |
|----------------------------------|----------------|-----------|----|
| Gender                           | Male           | 84        | 41.8 |
|                                  | Female         | 117       | 58.2 |
| Age (mean = 57 years)            | Primary education | 152     | 75.6 |
|                                  | Secondary education | 35     | 17.4 |
|                                  | Vocational certificate | 2     | 1.0  |
|                                  | High vocational certificate | 9 | 4.5 |
|                                  | Bachelor’s degree | 3      | 1.5  |
| Rice farming experience (30 years)|                |           |     |
| Rice farm size (mean = 14.54 rai) |                |           |     |
| Rice farm ownership              | Owned          | 154       | 76.6 |
|                                  | Rented         | 23        | 11.5 |
|                                  | Both           | 24        | 11.9 |

| Rice yield (mean = 384.03 kg/rai) |           |
|----------------------------------|-----------|

*1 rai = 0.16 ha

3.2. Farmers’ perception of RPCE’s roles

Table 2 shows farmers’ perception of the roles of the community enterprise they belong to. Members perceived RPCE mainly as a venue for increasing their income, having a strong rating (WAI = 0.76). Meanwhile, the enterprise’s role in supplying farm inputs at fair price, knowledge and skill improvement, increasing social network, product competition with rivals, and provision of credit service were all rated as medium (WAI = 0.50-0.74). Lastly, farmers see the RPCE’s role as a saving source as weak (WAI = 0.45).

Members play a crucial role in enterprise development. Likewise, the knowledge gained from farmers’ perception keeps the farmers, and the leaders connected, bringing the organization into a livelier manner [7]. In the current study, RPCE’s role as a way of increasing farmers’ income is in line with the findings of Laiprakobsup [10] and the goal of the ‘RPCEs Act of 2005’ [1]. This means that the government has achieved its goal throughout the years in supporting small-scale farmers in this aspect. The study of Petcho, et al. [2] also found positive perceptions of farmers for this role, which received a medium rating. The ability of farmers to secure inputs at a lower and fair price because of the enterprise’s efforts have contributed to the increase in income. Moreover, some members cultivate and sell organic rice, which is for the niche market [5]. This has allowed them to gain more income from organic price premiums. However, the RPCE’s role as a saving source has been perceived as weak, indicating that most farmers did not promote the saving behavior among members. Since they are small farmers, most of their income is plowed back into the investment instead of allotting it to savings [11].

Table 2. Farmers’ perception about rice community enterprise’s role.

| RPCE’s role                                 | WAI  | Interpretation |
|---------------------------------------------|------|----------------|
| Source of savings                           | 0.45 | Weak           |
| Supplying farm inputs at fair price         | 0.71 | Medium         |
| Knowledge and skills improvement            | 0.69 | Medium         |
| Increasing social network                   | 0.58 | Medium         |
| Increasing income                           | 0.76 | Strong         |
| Product competition with rivals              | 0.64 | Medium         |
| Provision of credit service                 | 0.63 | Medium         |
RPCE’s roles in helping its members gain new knowledge and skills and building networks with other organizations were rated medium by farmers. This reflects the considerable efforts exerted by RPCEs in providing trainings and other knowledge transfer services to farmers. These are important to create more awareness of technical skills and the latest scientific advances useful in farming [12]. These efforts would also not be possible without the support of various government agencies and non-profit organizations. Moreover, this finding also reflects the RPCEs’ role in developing linkages with other farmer cooperatives and farmer groups, which are vital for improved information and resource sharing [13]. Networking among farmer groups is a common practice in Thailand. This enables farmers to connect with farmers from other provinces and gain access to resources and knowledge that are not within the enterprise [14]. Networking also benefits farmers offering organic rice through direct communication with sure consumers, thereby reducing transaction costs. This has been observed by Petcho et al. [2] in Central region of Thailand.

RPCE members see competition with rivals as medium. This is a healthy indicator since agricultural products are competitive in nature. The presence of competition enables them to offer products with more value for money relative to their competitors [15]. Competition in an RPCE is also not uncommon since they offer a variety of rice products to be at pace with the changing consumer demand. The most popular among these is organic rice. Many RPCEs cultivate organic rice due to its perceived high quality, mainly preferred by health-conscious consumers [16,17]. Meanwhile, provision of credit was also perceived by farmers as a medium role by the RPCE. This finding demonstrates the high capacity of RPCE in lending money to its members. Credit is one of the essential supports that an organization can provide to its members. Previous studies have reported the important role of credit facilities to farmers [18,19]. The provision of loans to farmers enabled them to expand farming operations, thereby encouraging more farming activities. This, in turn, increases their opportunity to earn more and diversify income sources. Low-interest loans, likewise, help farmers finance other activities such as certifications for organic standards and input acquisition, among others [20, 21]. Although some studies have pointed out that credit is not that necessary as it increases farmers’ debt [2], this study reveals the positive perception of members to this role by RPCEs and the favorable perception of leaders to this important facility for farmers.

4. Conclusions
This study reveals farmers’ perceptions of the RPCE’s roles. Farmers have a strong perception of the RPCE as a venue for increasing their income, while medium perception towards knowledge and skills improvement, supplying inputs at a fair price, increasing social network, product competition with rivals, and provision of credit facilities. Although these are favorable, demonstrating the considerable efforts exerted by RPCEs to improving its members, these areas can still be enhanced for greater member benefits. The enterprise is encouraged to focus on enhancing these roles to improve member perception and attract other farmers to join.

As a policy recommendation, the government should further intensify its support for RPCEs in terms of promoting saving behavior among members, as this was rated as weak. This will encourage more member participation in the RPCE, and more farmers can access information and organizational benefits, consequently improving the lives of farmers in the study area. These all boil down to the government’s ultimate goal of improving the market access and competitiveness of these small farmers. Future studies should also assess members’ and non-members’ intention to join community enterprises to set specific strategies to encourage greater farmer participation.

Acknowledgement
This short study is a part of the first author’s dissertation, supported by the research fund of King Mongkut’s Institute of Technology Ladkrabang (KMITL) Doctoral scholarship, Bangkok, Thailand, under Grant KDS2019/026. The authors would like to thank the farmers and community enterprise leader for their time and participation in this study.
References

[1] Economic and Social Development Council 2018 National Strategy (2018-2037) Unofficial English Translation (Bangkok: National Economic and Social Development Board)

[2] Petcho W, Szabo S, Kusakabe K and Yukongdi V 2019 Farmers’ perception and drivers of membership in rice production community enterprises: evidence from the Central region, Thailand Sustainability 11 1-17

[3] Cramb R 2020 White Gold: The Commercialisation of Rice Farming in the Lower Mekong Basin (Singapore: Palgrave Macmillan)

[4] Seenuankaew U, Rattichot J and Leenaraj B 2018 Farmers’ information behaviors that facilitate the strengthening of their management capacity from passive to active community enterprises: Nakhon Si Thammarat, Thailand Information and Learning Science 19 260-74

[5] Kramol P, Suepbongsang P and Ekasingh B 2020 Farmer organizations in Ubon Ratchathani Province in White Gold: The Commercialisation of Rice Farming in the Lower Mekong Basin ed R. Cramb (Singapore: Springer Singapore) pp 85-99

[6] Lahlali R, Jaoud M, Moinina A, Mokrini F and Belabess Z 2021 Farmers’ knowledge, perceptions, and farm-level management practices of citrus pests and diseases in Morocco J. of Plant Diseases and Protection (Early Access) 1-14

[7] Alotaibi B A, Yoder E, Brennan M A and Kassem H S 2021 Perception of organic farmers towards organic agriculture and role of extension Saudi J.of Biological Sciences 28 2980-86

[8] Gunawan E, Kuwornu J K M, Datta A and Nguyen L T 2019 Farmers’ perceptions of the warehouse receipt system in Indonesia Sustainability 11 1-21

[9] Cofie O, Adeoti A, Nkansah-Boadu F and Awuah E 2010 Farmers perception and economic benefits of excreta use in southern Ghana Resources. Conservation and Recycling 55 161-6

[10] Laiprakobsup T 2018 Leadership, trust, proximity to government, and community-based enterprise development in rural Thailand Asian Geographer 35 53-84

[11] Somswasdici T, Thongsukhowong A and Nakapaksin S 2015 The guidelines for management of community enterprises: a case study of Don Chang Subdistrict, Khon Kaen Province, Thailand Asian Social Science 11 91-6

[12] Kasem S and Thapa G B 2011 Crop diversification in Thailand: status, determinants, and effects on income and use of inputs Land Use Policy 28 618-28

[13] Raungpaka V and Savetpanuvong P 2017 Information orientation of small-scale farmers’ community enterprises in Northern Thailand Kasetsart J. of Social Sciences 38 196-203

[14] Thitinunsomboon S, Chairatana P A and Keeratipibul S 2008 Sectoral innovation systems in agriculture: the case of rice in Thailand Asian J. of Technology Innovation 16 83-100

[15] Van Phuong N, Thu Huong T T and Quy B H 2020 Successful agricultural cooperative model in Vietnam. A Case Study: Van Duc Co-operative in Waking the Asian Pacific Co-Operative Potential ed M. Altman, A. Jensen, A. Kurimoto, R. Tulus, Y. Dongre, and S. Jang (Academic Press) pp 125-136

[16] Suwanmaneepong S, Kerdriserem C, Krichanont I and Wongtragoon U 2020 Farmers’ adoption of organic rice production in Chachoengsao Province, Thailand J. of Agricultural Extension 24 71-79

[17] Panpluem N, Mustafa A, Huang X L, Wang S and Yin C B 2019 Measuring the technical efficiency of certified organic rice producing farms in Yasothon province: northeast Thailand Sustainability 11 1-16

[18] Loquias M P, Digal L N, Placencia S G, Astronomo I J T, Orbeta M L G and Balgos C Q 2021 Factors affecting participation in contract farming of smallholder cavendish banana farmers in the Philippines Agricultural Research (Early Access) 1-9

[19] Yanakittkul P and Aungvaravong C 2020 A model of farmers intentions towards organic farming: a case study on rice farming in Thailand Heliyon 6 1-9

[20] Pompratansombat P, Bauer B and Boland H 2011 The adoption of organic rice farming in northeastern Thailand J. of Organic Systems 6 4-12

[21] Rattanasuteerakul K and Thapa G B 2010 Towards organic vegetable farming in Mahasarakham province, Thailand J.of Sustainable Agriculture 34 57-79