Contributions of Agricultural Cooperatives Towards Oil Palm Smallholder Communities

Sarmila M S*; Zaimah R*; Novel Lyndon*; Rosniza Aznie Che Rose*; Sivapalan Selvadurai*; Rusydya Ramly*; Nur Hanani Mansor**; Aki@ Zaki Aman**; Nazirah Jaafar**; Khairul Anwar Isnin** and Mohammad Arfan Johari**

ABSTRACT

A cooperative is an alternative model for community development which is able to meet the needs of the local community in enhancing their economic activities. This study aimed to evaluate the contributions of cooperative organisations to the agricultural community, focusing on the oil palm smallholders’ (OPS) communities in Malaysia. Questionnaires were distributed as an instrument for data collection in the study. A total number of 40 members of the Sustainable Oil Palm Cultivation Cooperative (SPOCC) from Temerloh district agreed to be the respondents of this study. A descriptive analysis was conducted including an analysis of the mean, frequency, percentage and standard deviation. The study found that SPOCC had contributed to the increase in income and standard of living of the smallholders. The study also found that the cooperative assisted in marketing their agricultural produce, provided access to farming inputs, enhanced their agricultural skills, monitored the communities’ agricultural activities, provided employment opportunities, strengthened the relationship among smallholders, and managed agricultural activities and facilities. However, several elements need to be given attention to improve the current contribution, such as providing farming technology, loans, and capital assistance, increasing community participation, and assisting in crop infrastructure. The study's results show the potential of cooperatives in efforts to assist in the development of oil palm smallholders’ communities.

Keywords: oil palm smallholder, sustainable oil palm cultivation cooperative (SPOCC), agriculture.

INTRODUCTION

A cooperative organisation refers to an organisation which requires the collective and voluntary involvement of individuals in achieving goals that cannot be attained individually (Kumar et al., 2015; Bibby and Shaw, 2005; Fairbairn, 2003; International Cooperative Alliance, 1995). Therefore, a cooperative serve as an alternative model to meet the development needs of the local community and also to eradicate poverty faced by the community (Cooperative Commission of Malaysia, 2015;
Community participation in cooperatives enables the community to be actively engaged in the economic activities that maximise the use of local resources (Innocent and Adefila, 2014; International Cooperative Alliance, 1995). In most countries, the agriculture industry has become one of the engines driving the development of the economy (Kumar et al., 2015), while agricultural cooperatives are referred to as one of the most important organisations in the agriculture sector (Tortia et al., 2013).

In Malaysia, based on the Cooperative Commission of Malaysia’s (SKM) statistics, the number of cooperatives established has shown an increase. The number of registered cooperatives in 2013 was 10,914 compared with 10,087 in 2012. This number includes banking, credit, agricultural, housing, consumer, industrial, construction, transport, and services cooperatives. Based on the statistics, the number of cooperatives in the agriculture industry also rose, from 2318 in 2013 to 2547 in 2014 (Cooperative Commission of Malaysia, 2015). Therefore, the purpose of this study was to explore the contribution of the agricultural cooperative organisations in enhancing the economic activities of its members, using the Temerloh district Sustainable Oil Palm Cultivation Cooperative (SOPCC) Malaysia as the case study.

LITERATURE REVIEW

Agricultural cooperatives have been established to reduce poverty in local communities, such as those in Egypt, Tanzania and Ethiopia. Among others, they are instrumental in helping the farmers solve the problem of unfair market competition, and helping to improve the rural population’s economic situation (Pischke and Rouse, 2004). Agricultural cooperatives can be classified into three categories according to the central activities they conduct, namely, cooperatives for marketing of agricultural products, cooperatives which supply farm inputs, and cooperatives providing agricultural services (Tortia et al., 2013).

In the context of community development, one of the cooperatives’ establishment agenda is to achieve community development through an economic development outcome. A review of past research found that agricultural cooperatives had helped in providing financial loans to the farmers who are members of the cooperatives (Awotide et al., 2012; Kareem et al., 2012; United Nations, 2009). Financial loan assistance (often referred to as agricultural credit) had helped farmers secure agricultural inputs, which in turn successfully helped farmers increase their agricultural production (Awotide et al., 2012). This credit support was not only intended to help the farmers secure the source of farming inputs but also helped in structuring the farms’ irrigation system. Furthermore, a study by Ibitoye (2012) found that cooperatives in rural areas had worked with various parties which provided credit services to obtain loans for their members. The need of farmers in obtaining financial resources or agriculture capital is mentioned by Andrews (2015), thus, the farmers’ participation in the cooperative is expected to help them address this issue.

Various studies had also identified that the primary objective of setting up agricultural cooperatives by the farmers is to increase the production of agriculture products, which will lead to opportunities for the farmers to be engaged directly in marketing their products. In other words, the involvement of farmers in the cooperative can help these farmers maximise their profits through bulk sales and purchases (Zarafshani et al., 2010; Zeuli, 2002). Provision of market access has enabled the agricultural cooperatives to secure a more stable price, provide incentives to produce more yields, reduce transaction costs, and promote participation and integration of the farmers into a bigger sub-economy (United Nations, 2009). Hence, the establishment of cooperatives is considered a practical approach for addressing the problem of marketing agricultural products. This situation can stimulate economic development and indirectly provide opportunities to the small-scale community producers for marketing their agricultural products themselves (Henehan et al., 2011; United Nations, 2009).

In Korea, a study by Choi (2006) found that the cooperatives organisation has also helped the farmer community in maintaining their production and product quality through the introduction of new technologies. Adoption of new technologies was able to satisfy two parties, namely, the manufacturers and the consumers, through ensuring a safe and clean supply of products. A study on cooperatives in Malaysia by Nurjihan Idris et al. (2013) is in agreement that the use of new technologies increases agricultural production, while the technologies introduced by the cooperative are expected to be able to increase not only the quality of supply but also the community’s sales revenue. To help in maintaining the quality of the agricultural products, the cooperative assisted the community in providing agricultural inputs, such as fertilisers, pesticides and seedlings (Ibitoye, 2012; Ortmann
and King, 2007; Muhamed 2004). A study by Zeuli (2002) found that provision of insecticides helped the farmers protect their crops and increase production, while a study by Ortmann and King (2007) showed that provision of quality agricultural inputs such as seedlings was able to increase the agricultural sector production in Africa. In ensuring access to improved agricultural technologies and also agricultural inputs for use by the farmers, the cooperative also helped in monitoring agricultural activities. This monitoring activity increased the farmers’ income and helped eradicate the problem of poverty through improved quality of production and marketing (Verhofstadt and Maertens, 2014; Borgaza and Galera, 2012; Kareem et al., 2012).

The community’s participation in cooperative institutions not only helps them in agricultural production but also provides an opportunity for building relationships among the community members. These relationships can trigger contacts in business and enhance unity among the members (Muhammad Shehu Hussain, 2014; Barraud-Didier et al., 2012; Hansen et al., 2002). The relationships will also help the community participate in cooperative discussions and activities which can expand its influence and scope of control, and foster a sense of responsibility within the community. All these will assist in the ability of cooperative members to collaborate, which in turn provides opportunities to increase their quality of life and well-being (Majee, 2011). A study conducted by Syarifah Rohaya et al. (2013), on the Sarawak state cooperative found that excellent communication among members of the cooperative was the catalyst to its success. In addition, studies in Nigeria by Uzonwanne (2015) and Muhammad Shehu Hussain (2014) found that cooperation among communities through cooperative organisations has enabled their consolidation as a group which is then able to solve their problems and to meet their needs.

Thus, previous related research has found that there are several elements of cooperatives which show their successful contributions to their community members in achieving the community’s economic development. These elements include loans and capital assistance, marketing of crops, development of infrastructure, increase in income and the standard of living, access to farming inputs and production technologies, and also improvement of relationships and provision of facilities for managing the community.

**RESEARCH METHODOLOGY**

This study was conducted among the oil palm smallholders (OPS) who are members of SPOCC in Temerloh, Pahang. A quantitative approach using the survey method was used in the study. Questionnaires were employed as data collection instruments and distributed to all 63 members of the Temerloh SPOCC. A total of 40 completed questionnaires were returned. The questionnaire was divided into two parts. Part A relates to the respondent’s demographic information while part B had twelve elements of living, access to farming inputs and production technologies, and also improvement of relationships and provision of facilities for managing the community.

**RESEARCH FINDINGS**

**Respondents’ background**

Table 2 shows the demographic information of the respondents from Temerloh SPOCC. It was found that only men were members of SPOOC in Temerloh. The data
also show that the majority of the SPOCC members belonged to the age group of 50 to 60 years (40%) while those aged less than 40 years made up only 2.5%. The majority of the members had an income in the range of RM 1000 to RM 2000 (80%), while the rest received around RM 3000 to RM 4000 per month (20%). Most of them cultivated oil palm on their own land (67.5%), while the remainder did so on family land (17.5%) and on leased land (15%).

The study results examined SPOCC’s contributions to the community members through the twelve contributory elements listed in order of importance in Table 3.

**Increased income and standard of living**

The element of increased income and standard of living of OPS shows a mean score of 4.45. A review of the items that represented this element found that assistance from the cooperative to increase the amount of agricultural products through raising the production of fresh fruit bunches (FFB), assistance in obtaining MPSO certification, and the cooperative’s concern in increasing its members’ income contributed high mean scores between 4.55 and 4.57.

**Monitoring of the community’s agricultural activities**

Results of the study show a high mean score of 4.37 for the element of the cooperative’s help in monitoring the community’s agricultural activities. Analysis related to this element indicates the management’s frequent visits to the sites to monitor the community’s farming performance, and to provide advice, encouragement and moral support to OPS regarding agriculture, resulted in high mean scores between 4.37 and 4.55.

**Employment opportunities**

The element of employment opportunities shows a high mean score of 4.41. Analysis of items related to this element found that items which tested the cooperative’s ability to overcome the problem of unemployment, and to create other job opportunities besides farming, resulted in high mean scores between 4.47 and 4.45. Items which tested the cooperative’s efforts in eradicating local poverty, providing jobs in the plantation areas and increasing members’ income also show a high mean score between 4.30 and 4.40.

**Enhancement of agriculture skills**

The result for the cooperative’s contribution towards education recorded a mean score of 4.24. A review of the items that represented this element, namely, access to farming inputs

Analysis of the element of access to farming input supply showed a high mean score of 4.26. Items that represented this element, namely, access to

<table>
<thead>
<tr>
<th>TABLE 2. BACKGROUND OF TEMERLOH SPOCC RESPONDENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Profile</strong></td>
</tr>
<tr>
<td>Gender:</td>
</tr>
<tr>
<td>Male</td>
</tr>
<tr>
<td>Female</td>
</tr>
<tr>
<td>Respondent’s age:</td>
</tr>
<tr>
<td>20-29 years</td>
</tr>
<tr>
<td>30-40 years</td>
</tr>
<tr>
<td>41-50 years</td>
</tr>
<tr>
<td>51-60 years</td>
</tr>
<tr>
<td>61-70 years</td>
</tr>
<tr>
<td>70 years and above</td>
</tr>
<tr>
<td>Respondents’ income:</td>
</tr>
<tr>
<td>&lt;RM 1000</td>
</tr>
<tr>
<td>RM 1000-RM 2000</td>
</tr>
<tr>
<td>RM 3000-RM 4000</td>
</tr>
<tr>
<td>RM 5000 above</td>
</tr>
<tr>
<td>Respondents’ land status:</td>
</tr>
<tr>
<td>Own</td>
</tr>
<tr>
<td>Lease</td>
</tr>
<tr>
<td>Family land</td>
</tr>
</tbody>
</table>
fertilisers, seedlings, insecticides, management assistance in obtaining quality farming inputs and information relating to farming inputs, produced high mean scores between 4.02 and 4.52.

**Marketing of crops**

A review of the cooperative's contribution to the marketing of crops found that the mean score was 4.22. Details on items which represented the marketing assistance element are the cooperative's help in providing complete infrastructure facilities for collecting FFB, helping to market the crops, assisting in making FFB collection more efficient, and offering a higher and more stable purchase price for FFB. The mean scores for these items were between 4.07 and 4.17.

**Enhancement of OPS relationships**

Analysis of the element of the cooperative's assistance towards enhancing relationships among OPS showed a mean score of 3.90. A review of the items that represented this element, namely, the cooperative providing venues for OPS to gather and conduct meetings, and also helping the members to exchange views on the process of cultivation, showed high mean scores of 4.50 and 4.35, respectively. Items that tested whether the cooperative provided avenues to voice out the problems faced by OPS, and help developed good relationships with other cooperative members, also showed mean scores between 3.47 and 4.50.

**Management of community members' agricultural activities and facilities**

The study found the mean score of 3.82 for the community members' agricultural activities and facilities management contributed by Temerloh SPOCC. Items which represented this element were the cooperative's assistance to members in obtaining licenses, preparing the documentation and mediating with MPOB and the community members. These items showed mean scores between 3.35 and 4.55.

**Assistance in production technologies**

The study found that mean value for the element on assistance in production technologies contributed by Temerloh SPODC was 3.35. This element was measured by items such as the use of the technologies to carry out cultivation activities, OPS being introduced to new technologies to help them maintain the quality of fresh fruit bunches (FFB), and the readiness of farmers to accept new technologies. The mean score for these items ranged from 3.00 to 3.55.

**Increased community participation**

Analysis of the element of community participation in the oil palm industry showed a mean score of 3.27. This score is at a moderate level. A review of items which tested this element found that such items as the cooperative providing opportunities for youth to venture into oil palm cultivation, and the youth being engaged actively in the oil palm growing industry, had mean between 2.97 and 3.32. Only the item on the cooperative leading local communities in engaging with the agricultural industry showed a high mean score of 4.15.

**Loans and capital assistance**

Analysis on loans and crop or agricultural capital assistance offered by the Temerloh SPOCC to OPS showed a mean score of 3.06. Detailed analysis found that items which represented this element included provision of loans by the cooperative to start up cultivation, yearly loan facilities offered by the cooperative, and OPS applying for loans from the cooperative; these have mean score between 2.62 and 3.52.

**Crop infrastructure assistance**

The cooperative's contribution to crop infrastructure assistance showed a mean score of 2.52. This result implies that the mean score level is in the low category. A review of items which tested this element, namely, the cooperative's assistance in preparing terraced land, drainage, bridge culverts, fences in the farm areas, equipment and a place for waste disposal, showed mean scores between 2.50 and 2.70.

**DISCUSSION**

Based on the findings, the highest mean score for the contributions of SPOCC towards its member community came from increased income and living standards (mean score of 4.45). This finding is in line with that of Tesfay and Tadele (2013) which stated that the cooperative was able to play a role in increasing the income and living standards of the local community. The results also show that the mean scores for the elements on monitoring of agricultural activities, enhancement of skills through education, access to farming inputs, marketing the crops, management of community activities and facilities, enhancement of OPS relationships, and provision of employment opportunities were all in the high-level category. These results indicate that SPOCC's contributions were in line with those of existing studies (Verhofstadt and Maertens,
2014; Borgaza and Galera, 2012; Kareem et al., 2012) which discuss how a cooperative can increase its members' income through assistance in improving agricultural production and in marketing the agricultural products. The results also indicate that the cooperative's assistance in increasing revenue was instrumental through the monitoring of agricultural activities and enhancement of farmers' skills. Both of these contributory elements helped in improving the agricultural produce, while the high mean score for the element on enhancing relationships between OPS indicates the cooperative's potential for improving its members' development performance as this element is an essential factor affecting the ability of a community to collaborate in improving the quality of life and well-being of its members (Majee, 2011). Good relationships provide the potential ability of the SPOCC members to solve problems within the community as stated by Uzonwanne (2015).

However, the mean scores of the Temerloh SPOCC for the elements of production technologies, community's participation, loans and infrastructure assistance were at a moderate level. Thus, Temerloh SPOCC could not match the performance of the cooperatives in the District of Bac Ninh, Vietnam (Nguyen, 2011) and in Menoufiya Governorate, Egypt (Mohamed Farahat Abdel-Seed, 2004) which provided full infrastructure to facilitate the process of cultivation to the members, including agricultural machinery and warehouses for crop storage. Similarly, the element of technical assistance did not meet with the level of results in a Korean study (Choi, 2006). It was found that significant help from the cooperative in introducing agricultural technologies to maintain production and product quality.

### CONCLUSION

The study on the contributions of the Temerloh SPOCC shows the potential of agricultural cooperative organisations in contributing to the community who are members of the cooperative, particularly in increasing their current income. This contribution is realised through the marketing of the agricultural products, mainly through the sales of FFB. Also, the contribution to agricultural input access is equally helpful in improving crop yield and the farmers' income. The cooperative organisation has the potential to help the community collaborate among members, and to increase their ability to participate and compete in the market. However, several elements need to be given attention in order to improve the existing contributions. SPOCC needs to focus on agricultural infrastructure required by the community, introducing the

### TABLE 3. COOPERATIVE’S CONTRIBUTIONS TO THE OIL PALM SMALLHOLDER COMMUNITY

<table>
<thead>
<tr>
<th>Item</th>
<th>Mean</th>
<th>Level of mean score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased income and standard of living</td>
<td>4.45</td>
<td>High</td>
</tr>
<tr>
<td>Monitoring of community’s agricultural activities</td>
<td>4.37</td>
<td>High</td>
</tr>
<tr>
<td>Employment opportunities</td>
<td>4.41</td>
<td>High</td>
</tr>
<tr>
<td>Enhancement of agriculture skills</td>
<td>4.24</td>
<td>High</td>
</tr>
<tr>
<td>Access to farming inputs</td>
<td>4.26</td>
<td>High</td>
</tr>
<tr>
<td>Marketing of crops</td>
<td>4.22</td>
<td>High</td>
</tr>
<tr>
<td>Enhancement of oil palm smallholders (OPS) relationships</td>
<td>3.90</td>
<td>High</td>
</tr>
<tr>
<td>Management of community members’ activities and facilities</td>
<td>3.82</td>
<td>High</td>
</tr>
<tr>
<td>Assistance in production technologies</td>
<td>3.35</td>
<td>Medium</td>
</tr>
<tr>
<td>Increased community participation</td>
<td>3.30</td>
<td>Medium</td>
</tr>
<tr>
<td>Loans and capital assistance</td>
<td>3.06</td>
<td>Medium</td>
</tr>
<tr>
<td>Crop infrastructure assistance</td>
<td>2.52</td>
<td>Low</td>
</tr>
</tbody>
</table>
smallholders to new technologies as well as increasing its efforts in attracting the involvement of the community in the oil palm industry. Learning from the contributions by cooperatives in the neighboring countries, attention also need to be given to the ability to assist the cooperative's members in getting loans or capital to help them improve their agricultural activities. However, a more detailed study on the relevant contributory elements required by the SPOCC members will be able to further improve the cooperative's contribution according to the needs of the community. Such a study will help in focusing on the forms of assistance required by the cooperative’s members for improving their well being.

ACKNOWLEDGEMENT

The author would like to thank the MPOB-UKM Endowment Fund for funding this research under the code EP-2014-015.

REFERENCES


