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Performance of the Beef Cattle Cooperative in the Land Reform: A Case of Pang Sila Thong Cooperative, Thailand

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In Thailand, beef cattle farming was dominated by small-scale farming within adequate capital and land resulting in farmer cannot implement self-sufficiency system. Thus, creating a network in the form of beef cattle cooperative is an important strategic to enhance a competitiveness of beef cattle raising in Thailand. In this regards, Pang Sila Thong (PST), an outstanding beef cattle cooperative established in June 2003, consisted of 11 small-scale farmers in land reform. The member of farmers continuously increased to 279 members and seven staff in 2015. A good cooperative system can be useful for the beef cattle farming. Therefore, this study aimed to investigate the characteristics of PST beef cattle cooperative, and to find out determinants of cooperative financial performance. Data were collect from cooperative financial report. The analytical techniques employed in this study included descriptive statistics, and financial aggregates analyzed. The results revealed that the total capital of the cooperative was 42.26 million Thai Baht (THB). An average capital accumulated per member was 151,470 THB, while the total loan of the cooperative was 35.93 million THB. An average loan disbursement per member was 128,781THB. The liquidity ratio of the cooperative was 1.24 which represented a good liquidity position of PST cooperative. The research results also revealed appropriate measures required to improve cooperative finance.

Keywords: beef cattle cooperative, cooperative performance, cooperative financial ratio, Pang Sila Thong cooperative

Introduction

In rural and farm communities, cooperatives are important increasingly through provision of services, credits, farm and home supplies, and markets or outlets for farm products (Kraenzle, 1998; Adrian, 2001). Cooperatives provide real economic benefits to farm families through increasing the stability of the

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farming sector, improving market access for their products, as well as strengthening the farmers' position in the agri-food chain (Allahdadi, 2011). FAO (2012) stated that agricultural cooperatives play an important role in supporting small agricultural producers and marginalized groups. Getnet and Anullo (2012) pointed that agricultural cooperatives are important for rural organizations supporting livelihood development and poverty reduction. As such, in the country that agriculture sector is the main pillar of the country's economy, agricultural cooperative were established.

In Thailand, cooperatives was initiated by the government in 1915 with the primary objective as a means for improving the livelihood of small farmers. This is due to the increasing of debt problem resulting from the change of farmers' self-sufficiency economy to trade economy. Natural disasters such as droughts and flood have damaged farmers' agricultural products severely. Consequently, they lost their farmlands and became laborers, leaving their debts unpaid (Coop Land, 2016). Agricultural cooperatives are established to enable farmer members to engage in business together. Farmer members can assist one another in times of crisis as well as gaining a better livelihood and quality of members' life. Agricultural cooperatives are very important to the economy of Thailand, with up to 4,473 cooperatives representing 54.23% of the total cooperatives, and 6,403,733 members, representing 55.75 percent of all cooperative members (Cooperative Auditing Department, 2016).

However, the number of agricultural cooperative in Thailand has gradually declined for over the last 10 years from 3,993 cooperatives in year 2007 to 3,711 cooperatives in year 2016 as shown in Figure 1. The rate of dissolution of cooperatives in Thailand remains at a high rate and is likely to rise. Especially in 2014, the proportion of registered cooperatives to liquidate is 1: 1.54 meaning that when one cooperative emerges, there are 1.54 cooperative closure (Chanchoengpanit, 2015). Agricultural cooperatives in Thailand face many problems such as administrator, governmental management, and performance.

Beef cattle's farming, one of the agricultural sectors, is in predicaments and requires a cooperative approach in order to resolve problems. Beef cattle's farming is a major agricultural occupation in the rural areas. The economic value of the beef cattle's farming is at least 6.5 billion Thai Baht (THB) and involves more than 1.03 million households. In the past, the cattle farmers of Thailand aimed to use the agricultural labors Currently, cattle farming model has changed to feed cattle and to sell cattle for processing because the demand

for meat increases. Beef cattle's farming confronts many problems (e.g. farm management, foot and mouth disease, etc.). As a result, beef production is not adequate to meet consumption demand in domestic, especially high-quality beef (premium grade). In addition, the government's policies in beef cattle promotion and development lack of continuity. Therefore, beef cattle farming is inconsistency and unsustainability. The strategy for beef cattle farming during 2012-2015 purposed that beef cattle cooperatives was one of to solve the solution for beef cattle farming in the country, by promoting the integration and development network in form of farmer groups or as cooperatives. (Department of Livestock Development, 2012).

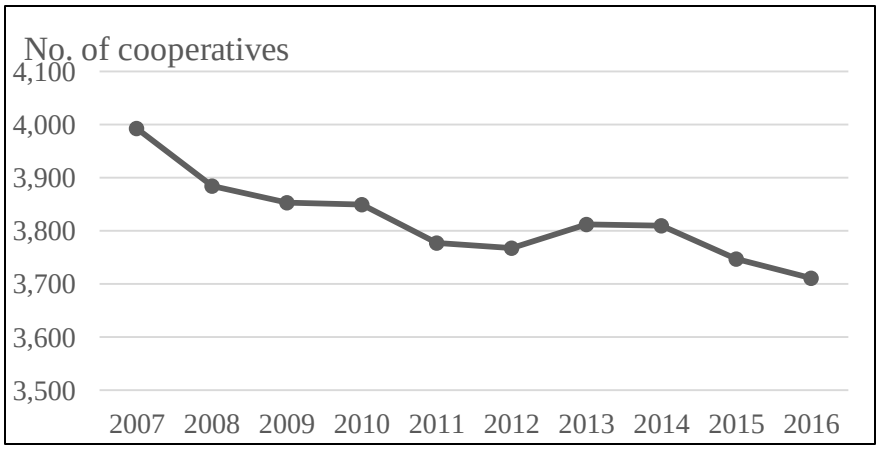

Figure 1 The number of agricultural cooperatives in Thailand since 2007-2016
Source: data from the Cooperative Promotion Department (2016)

In 2016, there are 71 beef cooperatives in Thailand, accounting for 1.9% of agricultural cooperatives (CAD, 2016). The Cooperative Audit Development launched project in year 2015 to strengthen and develop beef cattle business network of quality beef cattle cooperatives consisting of 20 beef cooperatives in 13 provinces. A good cooperative system can be very useful instrument to develop (Kassali, *et.al*. 2013). The success of agricultural cooperative movement should be considered by the quality of its performance than by the size of its membership or the volume of its operation (Chimkul, 2016). Case studies are an effective tool for exploring and understanding the development of experience and existing problems (FAO, 2012).

This study focused on the case study of Pang Sila Thong (PST) beef cattle cooperative to measure the cooperative performance, in order to provide

information to support policy by promoting the integration of beef farmers in the form of farmer groups or cooperatives. PST in Kamphaengphet Province is the one of beef cattle cooperatives in Thailand dominated by small-scale farms with adequate capital and land resulting in farmer cannot implement self-sufficiency system. PST is outstanding beef cattle cooperative established in June 2003, consisting of 11 small-scale farmers in land reform. The members of the PST cooperative increased to 279 and 7 administrative staff. The PST cooperative collaborated with the cooperative network (MAX BEEF), which was an advantage for enhancing the distribute channel of meat to the market. In 2012, PST cooperative received the award of excellence to the animals, and in 2016, the cooperative also received the award of Cooperative National Outstanding.

There are several indicators to measure cooperative performance. Each cooperative has different performance indicators, based on the ability of the executive officer system and the increase of cooperative turnover. Using financial performance is the most obvious indicator. (Behera, 2014). Financial ratio reflects the effect of cooperate strategic decisions (Parliament, et.al.1990). The task of measuring the financial performance of cooperatives is made problematic by the nature of the cooperative form of business (Liebrand, 2013). Many previous studies applied financial ratio to measure agricultural cooperative, for example Kassali, *et.al*. (2013) examined the financial performance of agricultural cooperative societies in Ibadan Metropolis, Oyo State. This study shed some light on appropriate measures required for cooperative financial performance improvement.

Therefore, this study aimed to investigate the characteristics of PST beef cattle cooperative, and find out determinants of cooperative financial performance. The research results can provide appropriate measures required for beef cattle cooperative financial performance improvement**.**

Materials and methods

Study area

Pang Sila Thong beef cattle cooperative in the land reform, Kamphaengphet Province was selected as the study area (Figure 2). Pang Sila Thong cooperative received the award of excellence to the animals in 2012 and the award of Cooperative National Outstanding in 2016.

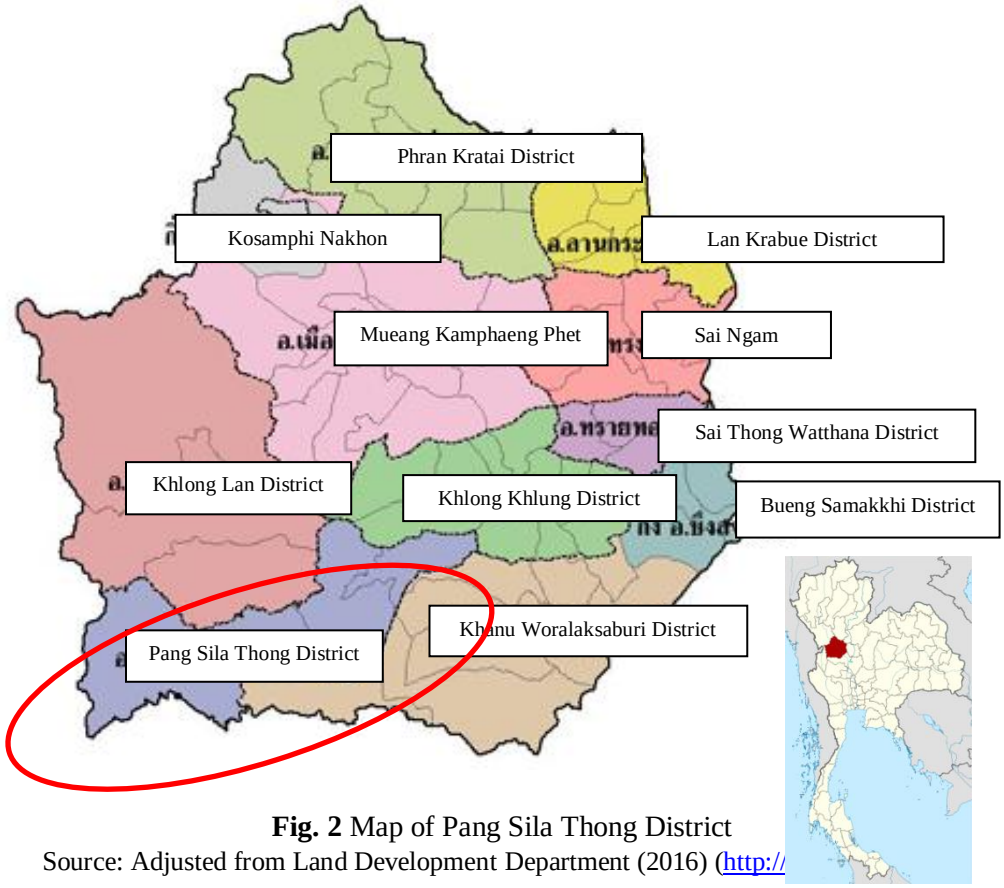

Fig. 2 Map of Pang Sila Thong District
Source: Adjusted from Land Development Department (2016) (http://

Data collection

Financial data for this study were obtained from 2015 PST annual report.

Data analysis

Descriptive statistics, financial ratios were employed to analyze the data. This study measured the financial performance of cooperatives based on the followings financial ratios: (Kassali, et.al. 2013).

$$1.\ Current\ ratio = \frac{Current\ assets}{Current\ Debt}$$

The current ratio is used to measure the short–term solvency, and it also indicates that the company can readily cover its liabilities adequately through

cash generated with its current assets. A current ratio of 2 or greater is preferable.

$$2.\ Acid-test = \frac{Current\ assets - Inventory}{Current\ Debt}$$

The quick ratio or acid test ratio is a specific test of liquidity. It examines whether a business is expecting to realize enough cash from its current assets in the near future to pay off all its current liabilities. A quick ratio of 1 or greater is preferable.

$$3.\ Equity\ to\ assets = \frac{Equity}{Assets}$$

Equity to assets ratio indicates the proportion of the shareholders' stake in the assets of the business that is the ratio of the business' assets financed by the shareholders.

$$4.\ Owners'equity\ to\ assets = \frac{Owner's\ Equity}{Assets}$$

Owner's equity to assets ratio can be used in two different angles. The first angle, investors can look at whether it can recover much of their wealth. However, if you look in the corner of the creditors, this ratio would imply a risk because if the loan is very risky.

$$5.\ Dept\ to\ assets = \frac{Total\ Dept}{Total\ Assets}$$

Debt to Assets is used to compare the total liabilities to the cooperative's total assets, and to indicate the level of financial risk.

$$6.\ Dept\ to\ equity = \frac{Total\ Debt}{Equity}$$

This ratio is important in knowing if the company or the cooperative society has over borrowed or not. A maximum "safe" debt per equity ratio is 50%, which means that one-half of the total assets of a business are being externally financed.

$$7.\ Current\ dept\ to\ equity = \frac{Current\ Debt}{Equity}$$

The current debt to equity indicates that investments in companies risk. If the result is greater than 1, the company has a debt more than the shareholders representing a higher risk. Alternatively, this ration also indicates the higher ability of the company's loan.

Results and Discussion

Administrator Structure of the PST cooperative

As shown in Table 1, administrator structure of the PST cooperative included 9 board of directors, 7 staff and 279 members.

Table 1 Administrator Structure of the Pang Sila Thong cooperative.

Position	Number
Board of Directors	
Chairman of the board	1
Vice chairman	1
Treasurer	1
Secretary	1
Committee	5
Staff	
Manager	1
Head of Administration and Finance	1
Credit	1
Accounting and Finance	1
Marketing	1
Extension and Training	1
Farm staff	1
Member	**279**

Source: Survey from Pang Sila Thong cooperative (2016)

The business of PST cooperative consisted of four businesses as show in Table 2. In year 2015, the cooperative had a business volume of 89.98 million THB ($2,531,630.19). The main business of PST cooperative was a loan for member accounting for 39.94% of the total cooperative business. This was the main objective of the agricultural cooperative to provide loans with for affordable rates of interest to members for productive and providential purposes (CAD, 2016).

Table 2 Business beef cattle in the field of land reform Pang Sila Thong cooperative in year 2015

Cooperative Business	Volume of Business (THB)	Percentage
1. Loan to member	35,935,873.00	39.94
2. Sale of consumer and farm supplies	29,263,560.50	32.52
3. Collect members' farm products	12,314,195.50	13.69
4. Saving and deposits	12,465,571.49	13.85
Total	**89,979,200.49**	**100.00**

Source: Survey from Pang Sila Thong cooperative (2016)

Remark: 35.542 Thai Baht (THB) equal to 1 US dollar (as of November 21, 2016)

Cooperative financial characteristics

Table 3 shows that the cooperatives had net sale 45.45 million THB ($1,278,659.079), Net profit after tax of 1.92 million THB ($54,064.036), Equity of 7.75 million THB ($217,977.250), and Net profit of 1.92 million ($54,064.036). In year 2015, the cooperative had total assets of 42.26 million THB ($1,189,234.397), current assets of 39.78 million THB ($1,119,296.954), current debt of 32.01 million THB ($900,613.423), assets of 42.27 million THB ($1,189,234.397), owner's equity of 42.22 million THB ($1,187,865.594), and total debt of 32.60 million THB ($917,193.110**).** These figures indicated that the cooperative had a good financial status for running business.

Table 3 Cooperative financial characteristics in year 2015

Formula	Total (THB)
Net sale	45,446,101.02
Net profit after tax	1,921,543.98
Equity	7,747,347.43
Net profit	1,921,543.98
Total assets	42,267,768.96
Current assets	39,782,052.37
Current debt	32,009,602.30
Assets	42,267,768.96
Owner's equity	42,219,118.96
Total debt	32,598,877.55

Source: The authors computed based on the data from Pang Sila Thong cooperative annual report (2015)

Remark: 35.542 Thai Baht (THB) equal to 1 US dollar (as of November 21, 2016)

Cooperatives financial performance

Table 4 shows the financial ratios of the PST beef cattle cooperative. The current ratio was 1.242, indicating that the cooperative have an ability to pay its debts over an exercise period. The current ratio above 1 was an indicator of cooperative solvency and can readily cover its liabilities adequately. The quick ratio or acid test ratio was 1.213. The cooperative had the ability to repay short-term debt. The ratio during 2 to 1 indicated endangers the cooperative's ability to meet current obligations (Williamson, 1987). The equity to assets ratio was 0.994. This ratio pointed out that cooperative equity could finance a good proportion of cooperatives' assets. As the owner's equity to assets ratio was equal to 0.998, the cooperative owned 99.8% of the cooperative's total assets showing that the cooperative financial stability.

Debt to total asset ratio was equal to 0.7712. This ratio presented normal range of cooperative's total assets comparing to liabilities which can be interpreted that no risk in the cooperative. In addition, debt to equity ratio was 0.772 presenting cooperatives' debt versus equity in the normal business risk. The ratio of current liabilities to equity was 0.758 denoting the comparison of cooperative's current liabilities to equity. This ratio revealed that the cooperative remained in normal business risks. In summary, the cooperative had a high debt ratio (greater than 0.5) which could be a trouble for the cooperative if it failed to meet its interest obligations (University of Wisconsin Center for Wisconsin, 2001).

Table 4 PST cooperative financial ratio analysis

Indicator	Financial Ratio
Current ratio	1.242
Acid-test	1.213
Equity to assets	0.994
Owner's equity to assets	0.998
Debt to assets	0.771
Debt to equity	0.772
Current debt to equity	0.758

Source: Computed by the authors

Conclusion

This study focused on the case study of Pang Sila Thong (PST) beef cattle cooperative in order to measure the cooperative performance. The result revealed that PST cooperative had a good financial position with appreciable minimum equity to assets (0.994) and acid test greater than 1 (1.213). However, the cooperative have a high debt ratio (greater than 0.5) which may be a trouble for the cooperative if it failed to meet its interest obligations. A low debt ratio was safe. The cooperative should consider improving their return with their business operation. This result provided information to support policy by promoting the integration of beef farmer as cooperatives in land reform and designing an optimal beef cattle cooperative. In addition, this result may help cooperatives to improve their financial performance. However, this study did not discuss on the factors affecting the cooperative financial performance. Consequently, the study of relevant factors was recommended for a further study.

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