

An Information System Pattern for Cooperative Management in Thai Supply Chain

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Abstract— The purpose of research was to develop and assess the suitability of an information system pattern for cooperative management in Thai supply chain. A sample consisted of ten experts that were selected by simple random sampling. The research was a purposive sampling technique. Data analysis was the average mean and standard deviation. The research tool was questionnaire assessing the suitability of an information pattern for cooperative management in Thai supply chain comprises six main components, namely suppliers, Cooperative, Distribution, Retailers, customer. The results from experts agreement of an information system pattern for cooperative management in Thai supply chain showed high appropriateness and can develop database the tasks.

Keywords— An information pattern, cooperative management, in Thai supply chain

1. Introduction

The emergence of agricultural cooperatives in Thailand dates back to 1914, when King Rama V opened the country's economy to outside trade. Commercialization of rice cultivation was occurring, but farmers were unable to profit from the scenario. Also, they became chronically and severely indebted as a result of their inability to repay their loans following national disasters like drought and flood. As a result, they were losing their farmlands, using hired labor, and failing to pay their obligations. Considering the Bank of Thailand's advice, because of Throughout history, Thailand's economy has benefited greatly from the agriculture industry. Yet, the concept of cooperatives was created because the non-agricultural economy has been expanding quickly.[20] A trade and mechanical division needs to be highly competitive due to increasingly high competitions from both within and outside the country. In order to be highly competitive, organizations in the sector need to have personnel with knowledge, ability and skills who can work efficiently to increase output and products. An organizations, therefore, need to have sufficient data and resources to add values and respond to the

demand of their clients. The supply chain and information system is key handle to back organization's entire exercises framework from upstream to downstream. It empowers an organization to instantly check the data framework to guarantee that the organization works easily and successfully based on the decided strategies. [1] Researcher has decided to develop and assess the suitability of an information system pattern for cooperative management in Thai supply chain for application to increase satisfaction of consumers.

2. Literature review

Supply chain and information is an one of a few elements of supply chain that can offer both improved performance. It enables cooperative to maintain key information in an accessible format and helps to take operational and planning decisions. Software and network technology adoption and successful deployment play a significant role in the success of the supply chain by enabling information flow and improving the effectiveness of supply chain activities.

Supply chain is the active management of supply chain activities to maximize customer value and achieve a sustainable competitive advantage. It represents a conscious effort by the supply chain cooperative to create and manage supply chains as effectively and efficiently as feasible. Product creation, sourcing, production, logistics, and the information systems required to coordinate all of these activities are all covered by supply chain activities.[20]

3. Research Methodology

3.1 Analyze and synthesize document and research studies related of an information system pattern for cooperative management in Thai supply chain

3.2. Develop an information system pattern for cooperative management in Thai supply chain

3.3 Make the assessment apparatuses for assess the model's suitability.

3.4.Responses from the ten experts were analyzed to find the arithmetic mean and standard deviation with Likert scales.

4. Results

Research findings about an information system pattern for cooperative management in Thai supply chain are presented in figure 1

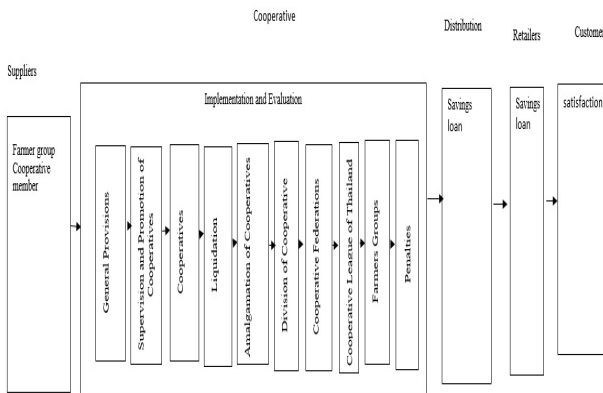


Figure 1: An information system pattern for cooperative management in Thai supply chain

Explanation on Components about an information system pattern for cooperative management in Thai supply chain

1 Suppliers

The suppliers mean the Farmer group and Cooperative member that supply raw materials to the cooperative. Raw materials in this case are money. They can send for admission via the computer system that can store the data systematically.

2. Cooperative

Cooperative is a business organization owned and formed by farmers and founded cooperatives, which are utilized as a tool to govern the business of each endeavour. namely, Common Arrangements, Supervision and Advancement of Cooperatives, Cooperatives, Liquidation, Amalgamation of Cooperatives, Division of Agreeable, Agreeable Alliances, Agreeable Association of Thailand, Ranchers Bunches, Punishments.

3 Distribution

Distributors refer to Savings, loan, dividend, Interest.

4 Retailers

Retailers mean Savings, loan, dividend, Interest.

5 Customer

Customer mean satisfaction from cooperative services.[1],[2],[3],[4],[5],[6],[7],[8],[9],[10],[11],[12],[13],[14],[15],[16],[17],[18] and [19]

Table 1: Results for evaluation about an information system pattern for cooperative management in Thai supply chain

No	Items	\bar{X}	S.D.	Suitability
1	Main components	3.68	0.59	High
2	Suppliers	3.70	0.57	High
3	Cooperative	3.70	0.67	High
4	Distribution	3.70	0.60	High
5	Retailers	3.67	0.62	High
6	Customer	3.70	0.67	High
	Total	3.69	0.62	High

Referring to table 1, An information system pattern for cooperative management in Thai supply chain is highly appropriate ($\bar{X} = 3.69$, S.D. = 0.62).

5. Conclusion and Discussion

According to evaluation an information system pattern for cooperative management in Thai supply chain is considered to be high appropriate (= 3.69, S.D. = 0.62), and the design was corresponds to the research of Chansamut about supply chain and information technology showed high level of suitability. [2],[3],[4],[5],[6] and the study of Chansamut and Piriyasurawong has studied Supply Chain Management Information System for Curriculum Management Based on The National Qualifications Framework for Higher Education can be applied to support the tasks.[1]

6. Recommendation

An information system pattern for cooperative management in Thai supply chain is considered to be high appropriate if possible it should create database for the developed pattern.

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