

Supply Chain Information Operational Model for Sugarcane Production for the Factory in Thailand

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Abstract— The research aimed to develop and to assess supply chain information operational model for sugarcane production for the factory in Thailand. A samples are ten experts in the field of information and supply chain. The data is analysed by means and standardized deviations. The research about supply chain information operational model for sugarcane production for the factory in Thailand consists of seven elements namely main components Suppliers, Factory (Manufacture) Distribution, Wholesaler, Consumers. The assessment about supply chain information operational model for sugarcane production for the factory in Thailand using Black-Box technique. The research findings revealed that supply chain information operational model for sugarcane production for the factory in Thailand is appropriate at the high level and can be develop information system.

Keywords— Supply chain information operational model, sugarcane production, factory in Thailand

1. Introduction

In the era of globalization, sugar cane production in Thailand has become an important part of economic and social activities. There are about 10,988,489 rai split into sugarcane mills of 9,864,042 rai planted under sugarcane in an area of 1,123,821 rai, and the farmers are represented by his three associations that supply sugarcane to the mills. The sugar cane supply chain is a major source of employment, creating over 10,000 direct jobs and over 7,000 indirect jobs. Key stakeholders in the Thai sugar industry include sugarcane farmers represented by three associations. Sugar cane and sugar board office. - Part of the government, such as the Sugar Industry Control Board, the Sugar Cane Production Board, and the Sugar Industry Research and Development Institute, the technical arm of the industry. Stakeholders in the state's sugar industry strive to improve agricultural practices and related environmental, labor, health and safety issues to

make the industry more competitive and sustainable in the future. [43] So An application of the concept of supply chain management information system is applied to factory system. It will be optional because the business 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. The organizations, therefore, need to have sufficient information and resources to increase their values and respond to the demand of their clients. Thus, the supply chain management process is a key process to support the organization's whole activities system from upstream to downstream. It enables the organization to promptly check the information system to ensure that the organization operates smoothly and effectively based on the determined strategies. [1],[2],[3],[4] Thus, researcher has decided develop and evaluate supply chain information operational model for sugarcane production for the factory in Thailand for ensuring customer satisfaction.

2. Literature Review

Supply Chain and Data framework is one of the objectives that all organizations or plant endeavour to realize. Supply Chain and Data will offer assistance firms progress effectiveness and decrease firms costs, Tall esteem clients and providers can be included or held by keeping up a dependable Supply Chain and Data. These will guarantee the firms to the objective to produces a high-quality item or benefit.[7]

3. Research Methodology

3.1 Studies the document about supply chain information operational model for sugarcane

production for the factory in Thailand and interviewing the expert

3.2. Draft the supply chain information operational model for sugarcane production for the factory in Thailand

3.3 Present supply chain information operational model for sugarcane production for the factory in Thailand

3.4. Create a questionnaire to assess model fit.

3.5 Present the designed supply chain information operational model for sugarcane production for the factory in Thailand to the ten experts

3.6 Supply chain information operational model for sugarcane production for the factory in Thailand is modified according to the experts' suggestions.

3.7 After modification, presenting supply chain information operational model for sugarcane production for the factory in Thailand in the questionnaire of diagram with report.

3.8 Analysis of evaluation results about supply chain information operational model for sugarcane production for the factory in Thailand by mean value and standard deviation consisting of five evaluation criteria based on the concept of Likert scale.

4 Results

Supply chain information operational model for sugarcane production for the factory in Thailand are shown in figure 1.

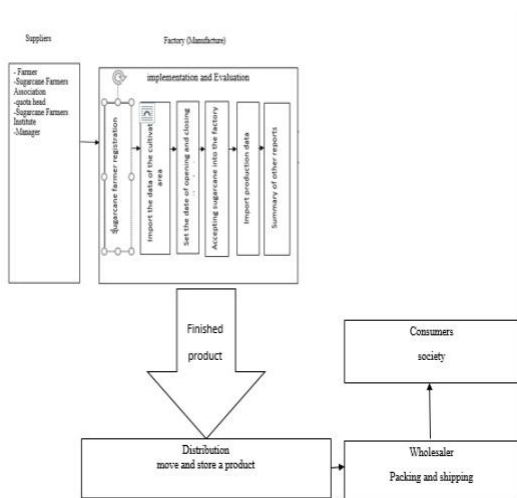


Figure 1: Supply chain information operational model for sugarcane production for the factory in Thailand

4.1. Suppliers

Suppliers mean Farmer, Sugarcane Farmers Association, quota head Sugarcane Farmers Institute, Manager, that supply raw materials to the manufacturer. Raw materials in the case are cane from high factory They can apply for admission through a computer system that can process and store data.

4.2 Manufacturer

Manufacturer means factory that produces finished products. It performs the duty to transform raw materials, or entering canes, into the finished products. The factory is responsible for the development of raw materials and the evaluation of each activity, such as registering sugarcane farmers, importing planted area data, setting chest open/close dates, accepting sugarcane into the factory, importing production data, and summarizing other reports.

4.3 Finished product

Finished product mean brown sugar, raw sugar and white sugar

4.4 Distribution

Distribution to the steps taken to move and store a product from the supplier stage to a customer stage in the supply chain. Distribution occurs between every pair of stages in the supply chain

4.5 Wholesaler

Wholesale is a step in the supply chain that includes raw material suppliers, finished product manufacturers, retailers, and end users. Retailers buy goods from wholesalers and sell them at a price sufficient to cover their costs and make a profit.

4.6. Consumers

By consumer we mean the end-of-process component of the model. They include society. Ultimately, the final product adds value to the supply he chain..[1],[2],[3],[4],[5],[6]

[7],[8],[9],[10],[11],[12],[13],[14],[15],[16],[17],[18],[19],[20],[21],[22],[23],[24],[25],[26],[27],[28],[29],[30],[31],[32],[33],[34],[35],[36],[37],[38],[39],[40],[41],[42]

Table 1: Results for evaluation of supply chain information operational model for sugarcane production for the factory in Thailand

No	Evaluation Lists	\bar{X}	S.D.	Suitability
1	Main components	3.65	1.19	High
2	Suppliers	3.62	1.04	High
3	Manufacturer	3.70	1.05	High
4	Finished product	3.60	0.84	High

Table 1: (continued)

No	Evaluation Lists	\bar{X}	S.D.	Suitability
5	Distribution	3.60	0.96	High
6	Wholesaler	3.60	0.96	High
7	Customers	3.70	0.94	High
	Total	3.63	1.00	High

Table 1, A experts found that supply chain information operational model for sugarcane production for the factory in Thailand is highly appropriate ($\bar{X} = 3.63$, S.D. = 1.00).

5. Discussion

Supply chain information operational model for sugarcane production for the factory in Thailand is considered to be high appropriate ($= 3.63$, S.D. = 1.00), and the design corresponds to the research of Chansamut and Piriyaawong has studied supply chain and information system about educational [2] In addition, Chansamut's research also found that supply chains and information systems.,[3],[4],[5],[6] , [7] and according to the review of documents and relevant literature from both within and outside the country on develop a model.[39],[40],[41] and [42].

6. Conclusion

Supply chain information operational model for sugarcane production for the factory in Thailand is good means a high level of development with an average rating of 3.63 and a standard deviation of 1.00, meaning the model is good Appropriate at a high level and useful for developing information.

7. Recommendation

Supply chain information operational model for sugarcane production for the factory in Thailand If possible, you should create an information system for development model.

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