# Chapter 1 Introduction

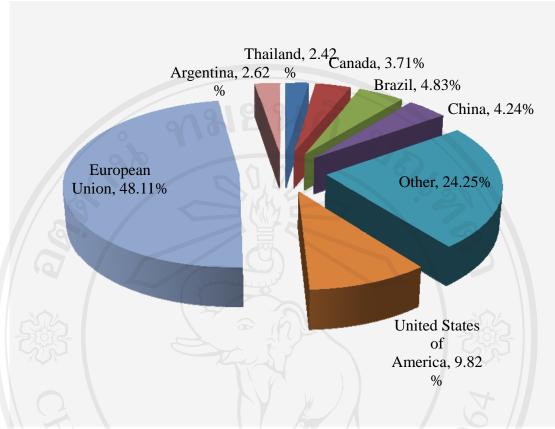
## 1.1 Statement and significance of the problem

Thailand is considered a source country of agricultural products with good quality and recognized as such around the world. Thailand was 1 of the 2 nations in the leading Asian Food market in 2550 with a 2.42% market share (Figure 1.1) and ranked No.7 of World exporters (National Food Institute, 2551). That is because of the advantages of the natural and human resources such as the climate, soil and water conditions and the familiar experience of professionals in agriculture, including the alteration of the agricultural society which has turned itself into the agricultural mature industry through which to add more value to products, check and create a variety of storage for longer periods to supply enough products to domestic consumption and export. The Thai food products can also meet the needs of domestic and global markets and the government has also continued to promote such ideas in the "Thai food to the world", in addition to economic restructuring in the agriculture sector, for example, developing the addition of value in agriculture and increasing economic potential.

Food and agricultural production in Thailand have an industrial role in the economic growth because many local materials are used and many resources are brought to develop the country, which benefits the industry and facilitates development for investments, especially the implementation of export revenue into the country. Although the proportion of food export has a decreasing tendency compared to other export values of other sectors (Figure 1.2) but Thai food export products are still varied and the quality is reliable and recognized by importers, buyers and consumers in many countries.

The frozen food industry is considered important because most of the frozen food is often processed from agricultural products and livestock and can be transformed into many types of food. The objective of refrigeration is to increase the storage time which leads to reduction in demand over supply of agricultural products during that season and adds value to products. Also, when compared with other countries and manufacturers frozen food from Thailand is considered higher quality and has been recognized by many countries around the world. As Thailand is an agricultural country, it has the advantage of the quality of the materials which leads to the increase in the bargaining power.

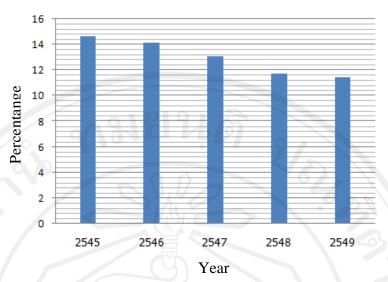
Due to the Hamburger Crisis in 2009, there are many influences to Thai industry especially in export part because of the main markets of export industry have been directly affected. This crisis has resulted in demand decreasing and also the export product. Due to the purchasing power of consumers around the world that is lower, the price of agricultural products is decreased and some of them flooded.



**Figure 1.1** Major food exporters in the world of 2550. Source: UNcomtrade database

In recent years, Thai export agricultural products have high volume and price because of the rapidly growing of the Republic of China's economy. But the Republic of China's economy depends on the U.S. economy. Therefore this is the cause of agricultural products' price to decreasing and competition to increase.

For the development potential of the frozen food industry for export in Thailand, competition in business is likely to become higher because of globalization which makes trade more open and free. As a result, businesses need to enhance their ability, for example, reducing operating costs, adding value to products or managing transportation for increased competitive advantage. Supply Chain Management has become the core strategy to build competitive advantage in business and local levels. The concept of supply chain management is businesses need to cooperate with other members in supply chain such as suppliers who supply raw materials, manufacturers, distributors, customers and business partners, which results in more productivity or enhances their business ability. So this concept has been widely popular. In addition to the competition from local carriers, both public and private sectors in Thailand have to compete with foreign countries, requiring entrepreneurs to adopt optimization and develop a working system through supply chain management.



**Figure 1.2** Percentages of export value of food compared to other export sectors. Source: Preliminary data from the Customs Department.

Another important step is "process measurement". In addition, to the reasons on the process follow-up, the process evaluation will show strengths and weaknesses of the organization that will encourage development, lead to the plan and improve operations. The performance measurement of supply chain management is determined through the measuring of cost, profit, standards and variance of operations. This demonstrates confidence in the operations of both finance and management simultaneously in keeping with the goals which require frozen food exporters of Thailand to advance in technology, management and operating costs to gain competitiveness in marketing. Currently the measuring of the performance of SCM in food manufactory has to play a role in helping organizations to identify strengths and weaknesses.

**Table 1.1** Export value proposition to divide the value of frozen food exports.

Unit: Million Baht

	2545	2546	2547	2548	2549	2550
The value of food exports	427,800.4	470,615.0	507,012.9	519,816.3	563,911.0	617,542.3
The value of frozen food exports	150,872.7	153,376.8	133,335.2	144,135.6	154,231.4	182,529.7
Proportion to export food	35.2	32.6	26.3	27.7	27.3	29.5
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Source: National Food Institute

The tools used in the development framework for measuring performance of supply chain management are varied. Balance Scorecard is another tool that can help organizations determine success through financial, customer, internal process and Learning and Growth perspectives. It results in improved balance and helps to divide

the budget and resources for all activities to occur properly and this leads to consistency in unison with a focus on what is important to the success of the organization. Moreover, this tool helps the organization in modifying behavior and culture based on defined goals and metrics tools that allow employees to recognize and understand that each event is also the source of another and will affect its own operations and another member in the supply chain.

At present the frozen food export of Thailand lacks the measurement of supply chain management performance because the measurement has not been adjusted to suit the specific characteristics of this type of manufactory. So this research will attempt to develop a framework for the measurement of the performance of supply chain management for the frozen food export of Thailand by applying the Balanced Scorecard concept and decision analysis as tools to develop and improve the efficiency of performance measurement in accordance with current conditions as well as actual strengths and weaknesses which lead to development capabilities in supply chain management.

#### 1.2 Research objectives

- 1.2.1 To develop a framework for performance measurement in supply chain management of exported frozen foods.
- 1.2.2 To measure the supply chain management performance of exported frozen foods.
- 1.2.3 To identify strengths and weaknesses that should be promoting improvement and propose general improvement concept for exported frozen foods.

### 1.3 Education/application advantages

- 1.3.1 Framework for measuring the performance of supply chain management for the exported frozen foods.
- 1.3.2 Measurement of the performance of supply chain management for the exported frozen foods.
- 1.3.3 Strengths and weaknesses of the exported frozen foods and general improvement concept for improvement supply chain management performance.

#### 1.4 Scope of Research

- 1.4.1 This research focuses only on supply chain management of exported frozen foods of Thailand and measures only the exported frozen food manufactory.
- 1.4.2 This research analyzes and identifies the performance measurement scope of supply chain management by Balance Scorecard principle [BSC].
- 1.4.3 To determine and emphasize the criteria, this research uses the interview with at least 5 concerned experts that are divided into 3 categories.
- 1.4.3.1. Scholars who graduated in directly related disciplines or in supply chain management research for at least 5 years.
- 1.4.3.2. A worker who has the management or operating decisions related to supply chain management in the frozen food manufactory with at least 5 years work experience.
- 1.4.3.3. People who work on planning policy or supply chain management and logistics for manufactory in the government.

1.4.4 This research applies the performance measurement framework in measuring the performance of supply chain management in the exported frozen food manufactories of Thailand which is the member of Department of Export Promotion at least 21 company (with 85 percent confidence interval and 15 percent standard error).



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