



**RESEARCH ON COMPETITIVENESS OF EXPORT TRADE AND
STRATEGY OF THAI MANGO**

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ABSTRACT

This paper adopts the evaluation index of export competitiveness included in International Market Share (MS), Trade competition index (TC) and revealed comparative advantage index (RCA) to discuss the competitive power, forecasting the position in the international market of Thai mangos and compared with the countries which are stronger in the world. In addition, this paper was based on Potter's "Diamond Model" system to analyze the main factors of exerting an influence on exporting Thai mangos, and then this paper selected the data from 1966 to 2016 years and the main sources of data come from UN Commodity Statistics Database, the Ministry of Commerce of Thailand, the National Statistical of Thailand and the mango production and Management Committee of Thailand.

Though analysis, the general competitiveness of Thai mangos in world market is stable and even stronger. However, Thailand is not the strongest country. Compared with the countries which are more developed such as Mexico, Brazil and Philippines, Thailand is still a little weak. Because the export trade of Thai mangos still face some problems and difficulties, and the export volume of Thai mangos has a limitation. On the following paper, some solutions are offered and suggestions are put forward to the influence factors and shortages.

Key Words: Export; Mango; Thai mango; regression analysis

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摘 要

众所周知，泰国是一个有潜力生产优质热带水果的国家，而生产水果的历史也是悠久，不仅在海内外都收到广泛的欢迎因而被称为“水果之国”。近几年来，芒果产业的发展也是越来越受到世界上的各国和各地区的重视，也就是说芒果产业也是一种发展较快的行业。芒果在泰国作为一种经济作物，这不仅是在亚洲国家等地区有很高的知名度，而在欧美等国家也是可谓闻名遐迩。本论文研究的任务是分析泰国芒果的生产和整体出口贸易，并分析影响泰国芒果出口的主要因素。

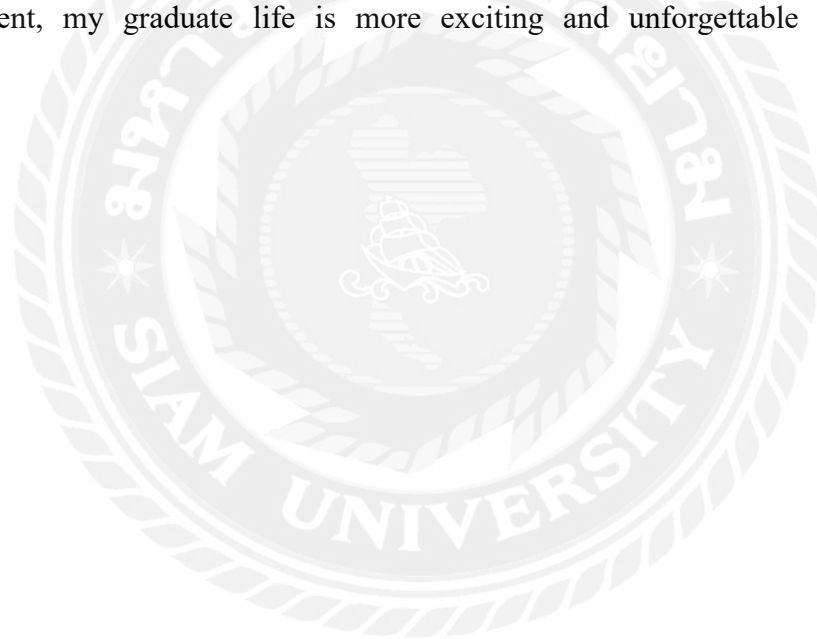
本论文进行采用出口竞争力评价指标：国际市场占有率(MS)、贸易竞争指数(TC)及显示性比较优势指数(RCA)来进行测算与同世界出口较强的国家对比，探讨了泰国芒果整体的竞争实力及预测泰国的芒果在国际市场地位、竞争力以及影响在此，选取了1996-2018年间的的数据，数据主要来源泰国商务部，泰国统计局和泰国芒果生产与管理委员会。

经过分析本人认为，总体来看泰国芒果是在世界市场上，从整体的竞争力比较平稳甚至较强了，但并不是最强的国家，而且跟世界芒果相对发达国家的墨西哥、巴西和菲律宾相比，还是稍微弱的，因为泰国芒果贸易出口还面临和存在一些问题和障碍的原因，就来限制了泰国出口芒果。随后本文针对影响因素及存在不足的地方做提出了对策建议。

关键词：出口；竞争力指数；影响因素；回归分析

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RESEARCH ON COMPETITIVENESS OF EXPORT TRADE AND STRATEGY OF THAI MANGO

Chapter 1 introduction

1.1 Research Background

Thailand is a producer of many high-quality agricultural products and has a long history of fruit production. Thailand, in particular, has a strong ability to produce high-quality fruits, especially tropical fruits, which are widely welcomed at home and abroad, so it is called "the country of fruits". And fruit products are one of the most important exports of Thailand, and fruit production is also a pillar of Thailand's economy. Thailand's fruit exports account for a high percentage of its gross domestic product. Once the Thai fruit in the export trade problems, then this will bring great economic losses to Thailand. Each year, Thailand's fruit exports exceed \$1 billion, mainly through partners such as Japan, South Korea, Vietnam, the United States and the European Union. Thailand has natural advantages in the production of tropical fruits. For example, the location of the land in the tropical region, with abundant sunshine and rainfall, is very suitable for the cultivation and planting of tropical fruits. Thailand mainly produces such as: rambutan, mangosteen, banana, durian, mango, longan, mangosteen, litchi and other tropical fruits. Mango is also one of the oldest fruit trees in the world. It has a long history of cultivation. Mango is currently grown in Thailand on an area also known as the front bud. Mango is also an important cash crop for Thailand as it stands since it was planted more than 700 years ago. Although Thailand does not have such a long history of mango production and cultivation, Thailand is also one of the most suitable areas for mango cultivation and cultivation, so there are many varieties of mango in Thailand. In the past ten years, through the joint efforts of the relevant departments in Thailand, and even the fruit farmers and sellers, and formed up to now experienced many vicissitudes not only to get and accumulate a lot of experience, but also made great achievements at home and abroad, and has a famous reputation.

At present, Thailand planted mango varieties countless, in many mango categories have different special points and USES, so according to this point can be divided into green mango, mango has mature and special to process mango, in addition, Thai consumers are more than a dozen kinds and have. The main characteristic of green mango is that the fruit is 70-80% ripe and ready to eat, whereas

the second variety is best at 70-80% ripe and good to eat. Examples of such mango are emerald green, red, French and nan sang. Mature mango, mango city needs to mature to 95-100% is the best to eat, taste is the best. The main varieties of this kind of mango are dolan mei, white ivory mango and baihua mango. The flesh of dolan mei mango is tender, sweet and full of juice. Dolan mei mango is one of the most widely used varieties in Thailand. In addition, the Thai people have created a more elegant dessert is "mango glutinous rice", the dessert is the use of dolan mei mango with glutinous rice, and poured on the coconut milk, resulting in a good taste and taste, sweetness is not high and not greasy, really well known. Next, dedicated to processing mangoes, is mostly used in factories

The molding and processing of the gauge, after processing products mainly include: dried mango slices, mango juice and canned mango, etc., the processing products are mainly used mangoes are mahakano, red mango, flange mango, among which mahakano mango is the most widely used variety for export. Although Thailand's geographical location and climate are very suitable for mango cultivation, but from the perspective of current mango production and export in Thailand, Thailand in the mango planting area and export scale of this larger space for progress, development is not outstanding. There are plenty of serious competitors in the industry that Thailand will struggle to avoid: Pakistan, Mexico, Taiwan, the Philippines and Vietnam. In addition, Vietnamese mangoes are slowly entering the international market, which will inevitably lead to increasingly fierce competition for Thai mangoes in the international market in the future.

1.2 The Significance

The research significance of this paper is mainly embodied in theoretical significance and practical significance.

In terms of theoretical significance, this paper mainly analyzes the mango production and export situation in Thailand, and USES the trade competitiveness index analysis and mathematical operation to analyze the main factors affecting the mango export in Thailand, and then USES regression analysis to verify. This analysis method combining theory and empirical analysis is relatively new for the study of mango export trade in Thailand. Therefore, the study of this paper also fixed an important theoretical basis for future scholars to study in this aspect, reflecting the theoretical significance of this paper.

In terms of practical significance, on the basis of comprehensive research on the overall export of Thai mango, this paper puts forward some countermeasures and Suggestions to promote the export of Thai mango. The proposal of these policy Suggestions can serve as an important reference for Thailand's mango and other agricultural export management departments in the formulation of relevant trade policies to promote mango export and the promotion of domestic mango production in Thailand. However, the practical significance of this study can be reflected.

1.3 Research outline and contents

This article is mainly for domestic and foreign scholars research achievements for reference, combined with different countries research experience, to explore the Thai in the mango industry production and export competitiveness research and comparison, and then to undermine the Thailand mango export factors make the actual, moreover can also according to the results show that the proposed countermeasures and Suggestions how to improve their own mango export competitiveness, thus can realize the fundamental purpose to promote the development of domestic mango exports. This paper consists of four aspects, as follows:

The first part: mainly introduces the background and significance of the topic, the research achievements of domestic and foreign scholars, the summary, and the main content and structure of this article.

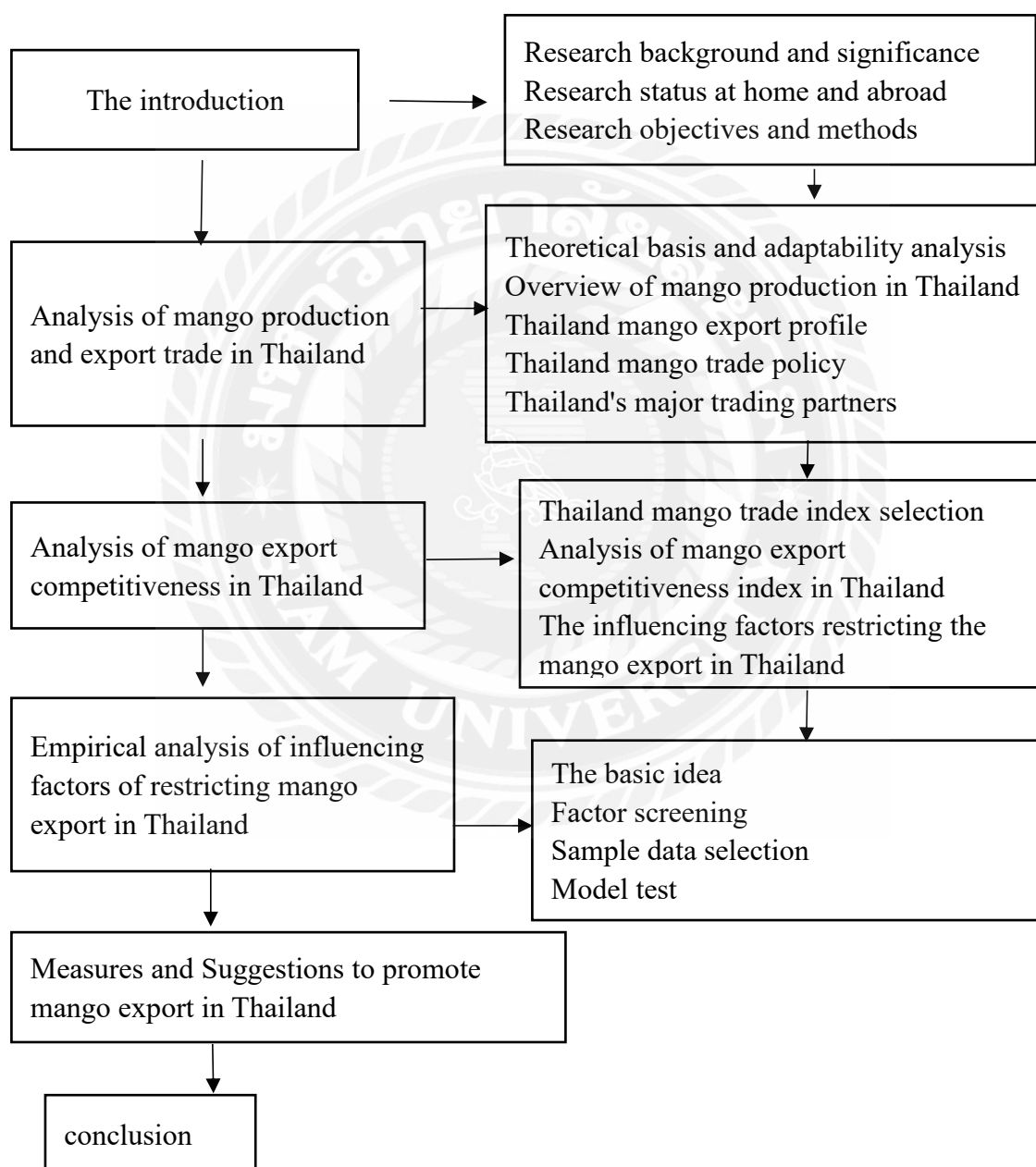
The second part: the paper introduces the related concepts of Thailand mango export competitiveness and related basic theory, through a proper indicators to compare and to the current situation of Thailand mango trade export competitiveness evaluation, then to analyze the mango production and trade, at the same time exports of mango stronger countries in the world, in the end, according to the results to make a summary together there may be problems.

The third part: firstly, under the guidance of relevant theories and foundations, according to the combination with previous research results and the actual situation, select the factors that will lead to the improvement of mango export competitiveness in Thailand. The export competitiveness index is used to analyze the mango export in Thailand.

The fourth part: combined with the basic situation of mango export in Thailand, according to the rationality and feasibility of the selection of data and the

establishment of data model and other principles, to do regression test, mainly for all the factors affecting the selection of empirical and calculation analysis. According to the results of data inspection and according to the degree of influence to arrange analysis. Based on the analysis and introduction of the basic situation of mango export in Thailand, this paper puts forward some Suggestions to further promote the export of mango trade in Thailand. The technical route of this paper is shown in figure 1-1:

Figure 1-1 research technology roadmap



Chapter2. Literature review

2.1 Analysis of Research abroad

SutipanBongsunan (2012) mainly studied and analyzed the fruit processing market and fruit production in Thailand. The objective of this paper is to study the production barriers and the processing industry market of Thai fruits. Based on previous research results, it can be found that the Thai government spends less and insufficient money on fruit cultivation, such as water, irrigation and machinery. At the same time, the production technology is found to be relatively backward, leading to production instability, export market is also prevented, on the contrary, the export of the trend of growth.

Chantana Jarmjareansuk (2011) is a Thai exports mainly research the influence of six kinds of fruit, this article adopts the structure of econometric methods and competition analysis model to study the main factors influencing the Thai fruit exports is given priority to, as Thai fruit market share some changes, the price of fruit at the same time also has the change, this will cause the consumer demand fluctuation change, also in changes that appeared on the market competitiveness, the Ming showed definitely have any impact on expanding market share, in the end, According to the results, Suggestions are made on how to improve product quality and how to increase the share of the international market at a reasonable price.

ApichatChirathivat (2013) found in the research process of this paper that when the export capacity increases, it also adjusts the output and the expansion rate of the world according to the market conditions. Is a measure of market share relative to the most important factors in the United States since the Asian country of Thailand as the main import of tropical fruits.

Yuttana Saelee (2015) mainly studies the comparative advantage analysis of Thailand's export trade. Thailand's tropical fruit industry is thriving, not only at home and abroad to achieve great consumer popularity, and has a beautiful name, with this, also full of potential production of high-quality tropical fruit countries. But there are still some problems and obstacles in the international market. Although the development of free trade zones in the world has had a positive impact on Thailand's export, it also brings more risks and fierce competition at the same time. Therefore, this paper USES comparative advantage to calculate the comparative advantage of some fruits of Thailand compared with the same type of fruit exporters.

AranyaSuppaasern (2011) mainly studies fragrant rice products produced and exported by Thailand. In this paper, the research direction is divided into three aspects. Secondly, related policies on Thai government system and export of fragrant rice products; Finally, the impact of major trading partners on the export of fragrant rice to Thailand.

BanomyongRuth and Ramingwong Sakgase(2013) mainly studied the comparison of mango supply chain in Thailand

And Japanese market analysis. To understand the relationships and connections between Thai and Japanese partners in the supply chain, research began upstream to downstream (farms, intermediaries, processing, factories and exports).

A. Blanco, g. masini, n.petacci (2012) mainly studied the packaging management in the fruit industry All surface.

Isabell Pott, Stefanie Konrad and Reinhold Scherer(2013) studied dried mango varieties in Thailand Applicability.

Li jianhua (2012) studied the mango industry and mango export in Taiwan. Due to the breakthrough in production technology, mango is also one of the important agricultural products in Taiwan, which means it becomes the second largest fruit in Taiwan today. So simply mango is one of the important fruits of Taiwan, Taiwan's mountain fruit has good technical ability, able to make a good adjustment and dispersed during the production of mango, enable the production of quality has been improved and has reduced the cost, in addition, with the technology for the improving the quality of the product, and added a new class of varieties, and it will can not only expand the domestic market, but also to expand the export market.

Zhu youen (2011) studied the bilateral FTA strategy of Thailand. With the recovery and development of Thai economy, Thailand's foreign economic and trade policies will also be able to implement the strategic transformation of bilateral FTA. This shift in strategy has been driven by a number of factors, both traditional and non-traditional, that have had a significant impact on Thailand's returns. Different voices on this transformation give Thailand's current FTA tropics some reflection, but to a certain extent, it also promotes the further maturity of Thailand's FTA strategy.

Weeks smiles send us light (2012) in this paper is adopted SWOT analysis method to the Thai from the actual conditions of agricultural products, according to

the analysis in this paper, according to the results of the Thai agricultural product not only, or all or some of the problems and obstacles, since the Thai agricultural products are some of the advantages outweigh the disadvantages, and represents the Thai kingdom in this aspect have made a very good development prospect and ways.

Zhang jianzhi, xie dehong and Chen yufu (2014) mainly analyzed and summarized the development characteristics and successful experience of mango industry in Thailand, aiming to provide reference for the development of mango industry in China. Mango in Thailand is a wide variety of varieties are good there are close to 20. In the past ten years, through the joint efforts of relevant departments in Thailand, even the fruit farmers and sellers, we have not only gained and accumulated great experience, but also made great achievements at home and abroad, and gained a reputation.

Liu peiqin (2015) mainly analyzed and summarized the characteristics and successful experience of mango industry development in Thailand, and studied "the competitiveness of Thai fruit in the international market -- a phenomenon mainly studied by the competitiveness of the national market". In this paper, SWOT, trade competition index (TC) and explicit comparative advantage index (RCA) are used to analyze the competitive position of Thai fruit in the Chinese market, and then the competitive strength affecting export is analyzed.

2.2 The Commentary research inside and abroad of analysis

Scholars at home and abroad have studied the mango industry in different degrees in terms of export and strategic development from different perspectives, which has played a great role and driven force in the development of mango industry in various countries, reflecting certain research contributions. However, there are relatively few studies on the competitiveness of Thai mango in the international market. Most of the studies only describe the development of fruit market in a certain country, but few in-depth studies are conducted on the specific situation of fruit trade. In addition, most of scholars' research is on the fruit industry in a certain country, and relatively few studies on a certain kind of fruit. In recent years, in terms of research methods, researchers of large Numbers have adopted more methods of collection and statistical analysis, combined with RCA index, TC index and other methods.

This paper is on the basis of previous research, to make a summary of this research Angle. This paper mainly conducts in-depth analysis on the situation of Thai mango in the international market. This paper USES the combination of qualitative

analysis method and quantitative analysis method, and USES econometric model to analyze this problem, so as to provide some specific methods for predicting the status, competitiveness and influence of Thai mango in the international market.

2.3 The Analysis of Theory and Applicability

2.1.1 The Basic of Theory

The theory of absolute advantage. The theory was put forward by Adam Smith in 1776. The theory is that: Is when one country in the production of a commodity units required to work with other countries to year-on-year is relatively less, that explains the country's occupies the position of absolute advantage, the products of the same circumstances, in the trade, if the product has a strong international competitive power is to have advantage position, on the contrary, have the weak competitiveness is in inferior position, in addition, this theory also believe that a country needs to have free trade policy, the policy is to must not restrict by government intervention, is to encourage the division of labor, the production in various countries are good at and the low cost of product, To trade between countries. Adam Smith pointed out that every country has different productive capacities, for example;

Suppose that both Thailand and Japan have demand for rice and cloth. Suppose that only labor is needed to produce rice and cloth in the production process. According to the production capacity of Thailand and Japan, the following table 2-1 shows:

Table 2-1 examples of absolute advantage theory.

To promote products	The productivity of the labor force is 1 person to 1 day	
	Thailand	Japan
Rice (barrel)	10	4
Cloth (m)	20	40

From the table, can see clearly that Thailand has absolute advantage in the production of rice, the same situation, Japan is have absolute advantage in production of cloth, so simply Thai the continuous reproduction of rice, Japan is also the same continuous production of cloth, for transaction is created after the trade between the two countries.

Second, the theory of comparative advantage. The theory was put forward by David Ricardo. Ricardo was another representative of classical economics after Adam Smith. It was in 1817 that he perfected the theory of absolute superiority and created the theory of comparative advantage. He also started by discussing the division of labor and specialization of individuals, and explicitly proposed that international division of labor and international exchange activities should be carried out according to the natural advantages and acquired benefits of a country. The basic idea of this theory is; Compared with foreign countries, a country not only has no disadvantage in the production of all products, but also can gain benefits in international trade through this theory. Even if a country's production capacity is belong to disadvantage compared with another country, but the two countries are still however can be traded down, countries can from the production has been compared with other countries products, after the country is also at the lowest cost for production, after trading with other countries, both sides could be time to trade the trading obtained at low cost, for the benefit of the production, but between the two countries have their own equal cost, lee

Kato believes that international trade will never happen under such circumstances, because no one will gain the cost advantage. As shown in table 2-2 below:

Table 2-2 examples of comparative advantage theory

To promote products	The productivity of the labor force is 1 person to 1 day	
	Thailand	Japan
Rice (barrel)	10	12
Cloth (m)	20	40

Says from the table, the Japanese production of rice have more advantages than Thailand equals 12:10 or 1.2:1, at the same time have an advantage in the production of cloth is also he or 2:1, very clear that Japan has the advantage of greater than Thailand, so Japan should cast into the factors of production is the production of cloth, in turn, found that although the Thai in rice production is left in an open position, but if just 1.2, compared to the production is not at a disadvantage in Thailand's space is huge, so also the Thailand Keep producing rice.

And then there's the theory of factor endowments. The theory is that by the Heckscher and Russian Lin two Swedish economy elements distribution, is in the 1920s, put forward the theory of factor endowments, can also be referred to as "H - O model" as a result, the theory it refers to the production cost of international and regional differences, is due to differences in factors of production supply, the theory reflects a country should be used in production and export more abundance of elements in the production of goods is more intensive, imported goods scarce factor of production, however, so simply say that a country should be in its own comparative advantage to the main export goods, This product is a large number of local production factors, to reduce the cost of products, but in the import of their own relatively unfavorable or scarce production factors, in addition, the theory of factor endowment is also one of the basic production of trade between the two countries. Finally, the theory of the diamond model is also known as the theory of national competitive advantage. This theory was put forward by Michael Porter in 1990. This theory is based on the enterprise of a certain country in the domestic and foreign market competition will obtain and need what conditions for the advantageous position as the main discussion, but also with the analysis of a country's certain commodity industry in the international has a strong advantage. , Michael Porter, an American economist, put forward the theory, it points out what are the factors that can affect a country's enterprises in the city, the Porter proposed a total of four main factors include: production factors, demand factors, industry factors and the competition between enterprises, in addition to the above, the government and opportunity is also a secondary factors, it is to form a national competitive advantage has the auxiliary role, influence of these factors of a country's national competitive advantage. (see figure 2-3)

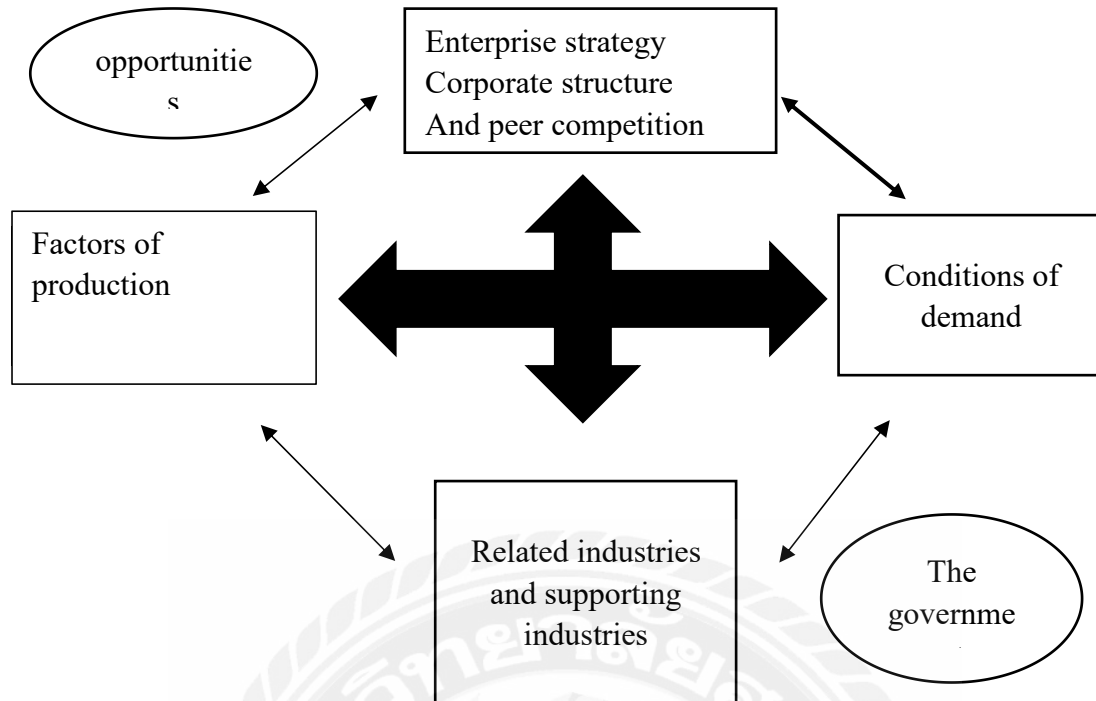


Figure 2-3 The Diamond Model of Michael Porter

First, the factor of production. In this context, the factors mainly refer to the production conditions possessed by enterprises of a certain country, which include several aspects such as basic facilities and equipment, natural resources, human resources and capital. Here porter also proceeds to distinguish these very clearly into two broad categories: elementary and advanced. At the primary level, production factors are all owned by each country, which can be obtained without paying so much capital or cost. It is the use of domestic factors to achieve the highest efficiency of output, including natural resources, climatic conditions, geographical location and capital. However, at the higher level, production factors include infrastructure, information, human resources for training, knowledge resources, transportation, communication and research structures. And at the advanced level of production factors, and, in this layer is needs a much longer period, and do a lot on human resources and capital investment, and on the condition of long-term accumulated enough capital will be able to be able to produce, so need a little time to step by step to complete, therefore, which country can integrate various advantage factors to make good use of, means the country will have an advantage in international competition. In addition, I have to say that the high-level factor is also a very important factor to achieve a competitive advantage.

Second, conditions of demand. It can also be called domestic market demand. That is to say, if domestic consumption is also very important, it means that the

market of the country needs to provide products or services for this industry in any case, which will generate competitive demand in the market. That is, the demand nature of domestic consumption depends on how enterprises meet the demand of consumption. If the domestic demand for the product or service has advantages that will give domestic companies face pressure to continuous innovation, the pursuit of excellence, and have to improve or develop new, in addition, the country's expected demand is unlikely to rush to create the industry's international competitiveness, so simply said that domestic demand is one of the elements of industry development of a dynamic, thus to improve the efficiency of the economy of scale.

Third, the industry factor. Industrial factors are also known as "related industries and supporting industries". This factor is a relatively complementary and common relationship. The factor industries and related industries

Interconnections are processes that communicate and diffuse through an advantageous network, and complementary processes can enhance their internal effects. Therefore, promoting and strengthening the international competitiveness of a country's industries, related industries and supporting industries are also indispensable factors. Porter finally needs people to be alert to point out that any enterprise with comparative advantages can never exist alone, and an enterprise should have a relevant relationship with a relatively strong competitive enterprise. In short, it should develop together, so as to promote the overall strength of the enterprise.

Fourth, competition among enterprises. Enterprise competition has different names such as enterprise strategy or peer competition. This factor, the enterprise or industry have improved competitiveness and promote the role of sex, for example, in the same industry have a competition, this will not only lead to continuously innovate, and constantly improve the human resources, improve the technology and the constant pursuit of excellence, improve labor productivity and to improve or develop newer products, etc., so one of enterprise, to have success in the international market advantage, is a must in advance now home after fighting in the domestic market, under the pressure of competition between domestic enterprises, which is a company can have and occupy the dominant position for a long time, This means that the enterprises have the opportunity to go abroad and participate in the competitiveness of the international market.

Fifth, the government. The national government also plays a role in the above four factors, and will be affected by these factors, both positive and negative. On the one hand, government policies such as subsidies, capital and education all affect

domestic production factors and domestic needs. In addition, government policies on taxation, prevention and monopoly all exert an influence on the competition conditions among domestic companies. Therefore, a country's government is also a situation that can change the competitiveness of a certain enterprise.

Sixth, opportunity. Opportunity can also be called opportunity, it is a good thing in itself, to the right time it, without trying to pursue it, in short, it is accessible but not available, opportunity can have an impact on four big factors. Although it is impossible to predict the changes and possibilities in advance, all of these bring about influences on the competition between domestic enterprises and output, such as; In the emergence of innovative technology or discrete technology, a main channel will be opened to new competitors, the intensification of market demand, great changes in financial market and exchange rate, and even wars. These variables are important because they lead to a "discontinuity" of output that is equivalent to opening up a channel to change the competitive position or overturn all previous advantages and redevelop new businesses. In general, it not only gives new competitors an advantage, but also a loss of advantage.

2.1.2 theoretical application for analysis.

The development of Thai manufacturing industry will also accelerate the development of Thai economy to some extent and attract more foreign investment. The development of Thai manufacturing industry will not only increase the overall income of Thai citizens, but also promote changes in the structure of Thai industries, including the development of agriculture. All in all, based on the theory of factor endowment, Thailand has a great natural advantage in fruit trade. This advantage is not only reflected in the geographical location, but also reflected in the climate, labor and other aspects. In comparison with other mango producing countries, there is comparative advantage or absolute advantage. Therefore, by using the basic theory of international trade, we can better analyze the development of mango export trade in Thailand. , in turn, by the diamond model, to the market under the condition of imperfect competition as the main mango industry production and export trade for Thailand's competitive advantage into the line analysis, and then find the Thai in mango export development main obstacle, response is put forward to solve the policy, finally promote the comprehensive development of export trade and Thailand mango industry progress.

2.4The Overview of Thai mango production

2.4.1 The Basic of Theory

(1) plant characteristics of mango from Thailand

Mangoes are tall, fast-growing trees and fruit trees. Mango tree branches grow very fast, the tree can grow up to 30-40 meters tall, thick bark, branches will be quick to become champions league appearance for the list, the trunk is straight, have the bark gray or gray-brown, with quite strong branches, leaves also pretty sharp, thin, about 15 -- 30 cm length, it is about 9 cm width, and about the petiole 3.5 4.5 cm, initially it is purple leaves, as time changes and growth becomes green leaves; Flowers terminal, panicles, inflorescences erect, with short hairs. Flowers small, sessile, pale yellow, fragrant, imbricate. But in different mango varieties, there will be different fruit shape, size, quality, color and even big differences. The shape of general fruit has elliptic, like human dirty shape and obovate etc. When the fruit is ripe, it has a green, yellow, and purplish red skin, and the flesh is yellow or orange. In addition, there are mango species whose bark and leaves are dyed black, so that the flesh is sweet and juicy to eat, as well as preventing vomiting and healing from burns. Mangoes are large fruit trees that are grown year-round throughout Thailand. However, mango cultivation requires sunlight, deep soil, canals on both sides of the fruit tree and good drainage. The soil is slightly acidic to neutral and sandy loam. If the soil has a good drainage and irrigation system, it can greatly promote the growth of fruits. Mango is also a drought tolerant plant. It is a sunlight-loving plant and can live for about 15 years on a single fruit tree. The size and weight of the Thai mango depends on the season and the location of the plant.

(2) mango production in Thailand

Mango is a perennial plant known scientifically as the mangiferain-dicalinn. In the worldShangmango is one of the oldest fruit trees, which originated in India and has a long history of cultivation.

Thailand is also a country with "fruit kingdom" one of the laudatory names, in the world's fruit market in the Thai fruit is also able to stand to an important position. Mango is also a very important cash crop for Thailand according to the current situation since it was planted more than 700 years ago, so mango can also be grown throughout the whole year in Thailand, so it is one of the most widely cultivated fruits. Since mango into Thailand, Thailand's growers in the long-term process of planting also constantly in the west and bud mutation for variety selection and improvement, let Thailand mango cause Thailand mango so far have many characteristics of varieties of epic proportions, with a tender meat meat, have high taste of sweetness

and aroma. Some mango varieties are edible when the skin is still green, with a sweet and non-sour taste. Up to now, there are 172 varieties of mango in Thailand, but only 10 varieties are cultivated for commercial purposes. Although Thailand mango variety, but in a large number of mangoes in Thailand consumer preference is only a dozen kinds, in addition, these mango more than a dozen kinds not only in the domestic and great achievements, but also in the foreign market has made a great consumer's welcome. In the past ten years, through the relevant departments in Thailand, and even fruit growers and sellers of common efforts, and since the formation of vicissitudes, not only to get and accumulated a lot of experience, but also made great achievements at home and abroad, and with famous reputation, in addition, also can stand on the international trade the important position.

(3) the main variety of mango in Thailand

Thai mango is one of the famous tropical fruits, because of its own flesh is very delicate, with relish, and full of flavor of the unique, in addition, also has a relatively rich nutrition, so not only by the domestic consumers, but also very popular with foreign consumers and love. Although there are numerous varieties of mangoes in Thailand, among the varieties of mangoes popular with Thai consumers are the following:

Green mango. It is one of the most popular mango varieties grown in Thailand. Compared with other kinds of mango, this kind of mango sells at the highest price and is popular with consumers. This green-skinned mango is characterized by its ability to be eaten before it is ripe and resistant to diseases and insects. The time from flowering to ripening is about 105-110 days. The shape of fruit is oval and long, the head is a little thick, and the average weight is about 350 grams. The flesh of immature fruit is white and delicate, while that of mature fruit is yellow, sweet and delicious.

Dolan mei mango. Doramay mango is one of the most popular mango varieties in Thailand. This mango is perfectly ripe, so you need the fruit to be near full ripeness. This species can be grown all year round. It is also the main type of mango exported from Thailand. For its own good

Many, not only has the meat quality series and tender, fruit itself has a high degree of sweetness and juicy, but also a full range of nutrients and vitamins, so no doubt in the export market by a large number of foreign consumers love and welcome. The fruit is round and long, with a short tail and thin skin. The average weight of each dolamey mango is about 400g. In addition, the Thai people also created a very famous dessert is "mango glutinous rice" and then the dessert is the use of dolan mei mango

with glutinous rice, add the coconut milk, resulting in a good taste and taste, sweetness is not high and not greasy, really well received.

Mangoes with hundreds of flowers. This kind of mango has a large fruit yield. Before Thai people are to use mango of 100 flowers to go up with glutinous rice to go up to eat together, but what edible dolan mei mango now is in the majority. The mango is rectangular in shape and small in size. This mango has pale green skin color and yellowish flesh. When ripe, its taste is sweet and mild, containing a lot of fiber. The average mango weighs about 250 grams. The mango is delicious when fully ripe and sells for a high price in the market.

Red mango. This is a light mango variety, which has strong resistance to the surrounding environment, diseases and insects. It blooms all year round and produces a high yield. The time from blossom to harvest is about 93 days. This kind of mango tastes sour and cannot be eaten alone. It needs to be served with dishes. The overall shape of the fruit is round, with a large head and a small pointed tail. The average weight of each fruit is about 300g.

French mango. This mango is a green-skinned mango, which bears a lot of fruits, which are round in shape, with dark green skin and rough skin, white inner flesh, and very delicate.

Mahakano mango. The mango likes a cool climate to enhance its red colour on the skin, and the fruit is oblong in shape with curved and tapering tips. The skin is thick, bright yellow, sometimes pink, the flesh is yellow, juicy and fibrous, with a strong aromatic aroma when ripe, the weight of the fruit is about 350 grams to 400 grams. It is one of the most widely used varieties of processed mangoes. Thailand not only exports fresh mangoes, but also processes and exports mangoes according to factory specifications.

The four seasons mountain. This variety of mango is very popular in Thailand. It grows all year round. So Thai farmers like the mango. Because it produces fruit all year round, bringing income to farmers. It takes about 110 days from flowering to harvest, and its fruit is oval and long. When ripe, it has a light green rind and a light taste. When ripe, the rind is golden or yellow in color, firm and fibrous, sweet or sour, with a pleasant aroma. The average weight of the fruit is between 300g and 400g. And it's also a processed mango.

Black and gold mango. This type of mango is very resistant to pests and diseases. It takes about 100-105 days from flowering to ripening. The mango can be eaten both when it is immature and when it is ripe, and it blooms all year round, making it a productive fruit with an average fruit weight of about 350 grams.

(4) methods of mango cultivation and management in Thailand

a. planting method

Mango is planted and propagated in Thailand by "mango grafting" as the main method, that is to say, the seed has good properties to the scion, and it should have a strong adaptability on the rootstock, and then in order to repair the wound, so the use of the thin layer of cells through both, the formation of new individuals. This method is the simplest method, and its advantages are that it is conducive to the rapid growth of scions, has a strong root system to absorb nutrients in the soil, and is resistant to drought and wind, and has a longer life. It takes about two to three years of planting to produce fruit, which requires care in the process, or it may result in a sudden cessation of material growth or death.

Because the mango tree is a kind of grow quickly tall trees of fruit trees, branches grow quickly, quickly into the look of the canopy, Thailand mango cultivated plant spacing and 10 meters x10 m, 6 m > 6 m, 4 m > 6 m and 5 m x3.3 m, no matter how much we should choose the planting distance to grow depends on the area and orchard planting varieties, but the attention is not a waste of space. Because too close will not be conducive to ventilation and light transmission, easy to produce diseases and insect pests, which has a direct impact on the yield and quality. And it's difficult to manage.

Table 2-4 mango production and management measures in Thailand

time	measures
January	Start flowering, spray water and fertilize
February	Chemicals are sprayed to protect and prevent pests and diseases, and fertilizer is applied to ensure fruit quality
March - April	Start harvesting
may	Pruning, using manure and manure
June - August	To prevent pests and diseases, spray pesticides
September	Eliminate weeds and fertilize
October	Fertilize the leaves and stop spraying water
November	To prevent pests and diseases, spray pesticides

Source: Cooperative website of Northern Slave Mango in Thailand <https://www.coopthai/mangoccs>

Summer (around march-june) is considered the best mango harvest season in Thailand. There is a time difference between northern and southern parts of Thailand. Due to the widespread use of off-season induction techniques, all mangoes can now be grown year-round. Mango harvest time is usually 105 to 115 days after flowering or by looking directly at the outside of the fruit. But for export mangoes must be at least 85% ripeness before they can be harvested, and care must be taken to avoid bruises and scratches.

According to figure 2-2, the total area of mango production in Thailand is very large, and mango is not only an important part of Thai food culture, but also an important cash crop. According to the data, the area of mango cultivation in Thailand has not increased greatly since 2016, but the quantity of mango production shows an increasing trend. In 2015, the area of mango cultivation was 2,019,980 square meters and the yield was 2,793,640 tons. By numerical comparison can be concluded that production is not restricted by planting area, while manufacturing limited surface, but farmers can continually increase production, which not only shows the Thailand mango planting technology had the very big enhancement, but also shows that the farmers have grown from the viewpoint of economic culture, on the use of limited land area arrangement more reasonable, avoid the waste of space. In addition, the geographical location and climatic conditions of Thailand are suitable for the cultivation of awn fruit. These factors rapidly increase the yield of mango in Thailand, and the quality is also very good, the taste of fruit is more natural and pure and so on.

Mango growers in Thailand. Across the country a total of about 700 planting fruit group, about 92 of them are mango plant tissues, but not mango production organization is here to export, root according to the planting mango association of Thailand, is mainly about a dozen is really is to provide for export production of mango, and these organizations are in northern Thailand, northeast and central regions (see figure 2-4). Thailand mango production period, due to the different location and different weather conditions, so that affect the types of export, export Thailand parts of mango varieties for dolan beautiful, four seasons mountain, black mans and Omaha cano mango, of course, these products of finally will blossom and bear fruit, planting different varieties in different regions. According to figure 2-5 Thailand planting mango export main organization and production and harvest time, although the Thai mango season is listed from late February to may, but the central region of the mango early mature, and in the northern region late natural mature, mature time since the genera complement each other, if planting mango association of Thailand have constantly quantity to complete production plan, so Thailand can also in the annual export of mango.

Table 2-5 mango production and area in Thailand

	2014	2015	2016	2017	2018
Production area (square meters)	1,925,164	1,925,164	2,019,980	2,046,280	2,087,680
Output (ton)	2,469,814	2,550,595	2,793,640	2,985,530	3,141,950

Source: Ministry of Agriculture, Thailand, Information Center <https://www.moac.go.th>



Chapter3. Research method

3.1 Selection of trade competitiveness index

In recent years, in the evaluation of competitiveness and comparative advantage index USES the most is the mainly include: the revealed comparative advantage index (RCA), relative trade advantage (RTA), comparative export performance index (CEP), international market share (MS) and the trade competition index (TC), and so on, but there are also part of the scholars in the process of research is to use Time series data (Time series) and the theory of constant market share. Chumpon Buakajorn

(2011) used Time series data and constant market share theory to analyze the development trend of mango exported from Thailand; YuttanaSaelee (2015) In this paper, he used RCA to calculate the comparative advantage of some fruits of Thailand over other fruit exporters of the same type. Smiles send us light zhou

(2012) this paper USES SWOT analysis method to analyze the actual situation of agricultural products in Thailand. Although the analysis results show that agricultural products in Thailand still face and have some problems, they still have great advantages and disadvantages as a whole. Liu peiqin (2015) adopted TC and RCA to classify the comparative advantages of Thailand, China and other exporting countries and to determine the fruits with comparative advantages of Thailand in the Chinese market. And this is is on the basis of predecessors' research, mainly for Thailand mango in the international market situation analysis, this article use the three export competitiveness evaluation indicators: international market share (MS), trade competition (TC) and revealed comparative advantage index (RCA) to calculate, compared with that with strong export countries in the world discusses the whole competition strength Thailand mango mango and predicting Thailand, competitiveness and influence in the international market status.

This article is mainly research results provide reference for scholars both at home and abroad, and combined with different countries of research experience, to explore the production and export of Thailand in the mango industry competitiveness research and comparison, and by measuring data, and make empirical analysis to various factors, which affect the export, in addition, according to the result of data measured and according to the influence degree of size to order to make analysis. In the analysis of comparison, this paper Thailand mango trade import and export data for collection and analysis, in addition, take the international market share (MS), trade competition (TC) and revealed comparative advantage index (RCA) index to measure the export

competitive force, and with strong export country in the world to compare, to discuss Thailand mango export overall competitive strength.

3.1 Swot Analysis

3.1.1 Swot Analysis concept

Swot analysis is always a more accurate and clear analysis. This method is divided from different angles. In this way, you can get the factors that are good for you and the factors that are not good, and these factors are very valuable. Have to carry forward and avoid. Use this software to identify problems, find out the cause, and take appropriate action to resolve the issue. Main analysis One aspect is: strengths, weaknesses, opportunities and challenges

3.1.2 Advantage

First, geographical location and climatic conditions. Thailand's geographical location and climatic conditions are suitable for growing a variety of tropical fruits. Because each region is affected by the monsoon, it has the characteristics of a regional tropical climate and the land resources of Thailand. Very rich. Therefore, most tropical fruits in Thailand can be harvested throughout the year. Develop the fruit industry in its large planting scale. The aspect has great potential.

Second, the production process. Thailand has a good irrigation system and is good for growing all kinds of tropical fruits. The government of Thailand has introduced various policies to support the production and export of fruit. Its policies are distributed in many fruit growing areas, such as durian trees are spread over many areas, so they can be harvested all year round. At present, Thailand applies agricultural science and technology to develop fruit production. The production of Thai fruits has increased rapidly because of the successful improvement of out-of-season fruits.

Third, Thailand's tropical fruit flavor is unique. Thailand's tropical fruit varieties, among which the most famous is the right lotus, dragon Eyes, mangosteen. All kinds of fruit taste different, unique flavor, and sweet and sour delicious, rich nutrition. So Thai fruit is in China Received a warm welcome.

Fourth, the logistics system is developed. Thai fruits are exported to China by various means, such as land route and air route Lines and sea routes. Overland route

has main route, it is highway, highway, highway and respectively Highway. These roads require less time, lower cost, and provide more fruit freshness, which will benefit Thai water Fruit exports to China have a greater role in promoting.Fifth, marketing strategy. Thailand opened a market through the china-asean fruit expo. China and asean held every year.Thailand's tropical fruits will be included in the high-quality fruits expo, and Thai fruits will have more opportunities to enter the homes of ordinary people in China.National fruit farmers also benefit greatly from this. To boost exports. The ministry of commerce of Thailand will hold a fruit show in Thailand

The Chinese market is being marketed primarily to Chinese consumers through the Shanghai world expo and the guangzhou Asian games. Thailand is set to export fruit.National promotion network.Thailand established a fruit export promotion network in China. The target users of the website are mainly Chinese buyers, importers and now.Agent trade emporiums, major exporters, trade associations, Thai fruit farmers and traders, and interested in selling Thai fruit in China.Relevant people.

3.1.3 Disadvantage

The first is that Thailand's varied climate every year will lead to unstable fruit production in Thailand. If the weather is bad in some years, for example, if the dry season is too dry, the reservoir capacity will be low and the agricultural water shortage in some areas will be caused. Drought or floods are possible if there is no rain for a long time or too much rain. Floods in Thailand last year directly reduced production of durian, mangosteen, rambutan and longan. The annual unstable climate can do great damage to the yield and quality of Thailand's fruit.

The second is that not many thais speak mandarin, so when Thai fruit exporters link up with Chinese importersThere is also a language barrier.

Third, fruit is easy to hurt and rot. Some fruits, such as mangoes and steamed fruits, can be easily injured if they are not carefully transported. Therefore, special care should be taken to use proper packing during transportation.

Fourth, distribution channel disadvantage. Most of Thailand's tropical fruit is shipped to Hong Kong and guangzhou, not Beijing

And big cities like tianjin.

Fifth, production costs are high. In recent years, the production cost of agriculture has been increasing, mainly due to the current fertilizer, agricultureThe

rising cost of medicine, seeds and Labour causes the price of fruit to rise too, leading to the export of fruit It's going down. Finally, due to the lack of experience, management and scientific knowledge of Thai farmers, some farmers are not good at using science and technology to produce fruits and are still using traditional methods, so the yield of fruits has not increased and the quality of fruits is not optimistic.

Therefore, it is necessary to hold training courses on fruit production science to improve farmers' production and management knowledge.

3.1.4 Opportunities

First, with China's tariff cuts, some fruits such as durian, mangosteen and rambutan cannot be produced in China And the lattice goes down. This factor promotes the import of durian, mangosteen and rambutan from Thailand to China

Chinese consumers can also buy cheaper fruits.

Secondly, due to the entry into force of china-thailand zero-tariff free trade agreement on fruits and vegetables, customs clearance procedures have been simplified and Thai fruits have been transported The amount of fruit China imports from Thailand has also increased rapidly because of lower import costs.

Third, the purchasing power of Chinese consumers has increased since China joined. China's rapid economic growth Domestic consumption power has grown substantially. Imported fruit is very popular with consumers today, so China's fruit production to Thailand The demand for goods is increasing.

Fourth, China has developed domestic transportation, allowing Thailand to transport tropical fruits to Chinese cities more quickly The city reduces transportation costs and the risk of spoilage.

Fifth, at present, Chinese people are more and more concerned about their health, so Thailand should seize this opportunity to promote water What good does fruit do to the body? This could increase Thai fruit's market share in China.

3.1.5 Challenge

First, according to the china-vietnam friendly relations policy stipulated in the china-asean free trade agreement, China applies fruits to Vietnam The policy of zero import tariff makes Vietnamese fruits more and more competitive in the Chinese market.

Second, yunnan also has longan growing areas. Some Chinese consumers believe that due to the problem of Chinese consumption habits Chinese longan is better than Thai longan, and its taste is not as good as Chinese longan.

Third, Vietnam is expanding the production and export of fruits, as China and Vietnam are adjacent to each other, allowing Vietnam to ship China also imports more fruit from Vietnam because of lower costs.

The main competitors for tropical fruits are Vietnam, the Philippines, Malaysia and Indonesia. While Thai tropical fruits dominate the Chinese market, they face fierce competition, especially from Vietnam in the south. These competitors are expanding their production and export of fruit. In recent years, these countries will be competing for Thailand Chinese fruit market share in China.

3.2 Analysis of export competitiveness index

3.2.1 International market share

International Market Share (International Market Share) is also called "Export Market Share, the Export Market Share), it reflects a country's Export competitiveness indicators, namely, the country's total Export and accounts for the proportion of total exports in the world, is a country's merchandise exports accounted for the total Export goods of the same kind in the world to Share, it can reflect a country exports actual strength.

Formula is: $\text{International market share} = \frac{\text{total export value of some country commodity}}{\text{world total export value of this commodity}}$ is calculated as follows: $MS_{ij} = EX_{ij} / EX_w$

In the formula: represents the market share of a country j commodity; EX_g , on the other hand, represents the total exports of commodities from that country; $EX\%$ is the total export value of the commodity in the world. If using it in Thailand mango on the export trade, will tell from the formula is the national mango export amount and the total exports of goods in the world to do the proportion, according to the results show that, if the value is higher, it is said that the country's commodity some very competitive in the international market, and the competitive power the weaker conversely. In addition, another function of this indicator is to visualize the change of

the competitive strength and status of the industry in the international market of a certain country.

Here, using MS theory and $MS = \frac{\text{the total mango export of a certain country}}{\text{the total mango export of the world}}$, this paper calculates the market share of mango from Thailand to other countries with strong export in the world from 2011 to 2015, and makes comparative analysis, as shown in table 3-1. Looking at the data in table 3-1, Mexico, Brazil, the Philippines and Thailand are among the world's top four mango exporters. Mango showed a trend of increasing the gross export is Mexico, so we'll see Mexico is mango international market share is much higher than the rest of the six countries, although it is a period of time present dropped slightly, but still keep the data when the highest state, so is Mexico's mango in the international market is very competitive. Brazil is the second-largest exporter of mangoes by value, after Mexico, but Thailand ranks fourth in the table, following the Philippines and Brazil.

According to the content of figure 3-1, the data decreased by 14% in 2015 due to the political reasons in Thailand. The overall trend has been spiraling upward. The small increase in volatility means that Thailand's products are competitive in the international market. But China's data station is minimal, in recent years, amount of mango are produced in the former shoots in the world, because China is a country with a top ten consumer, so about production of mango are used to provide domestic market consumption, at the same time, also with imported from abroad a lot of mango, mango is China imports is greater than the exports.

Table 3-1 international market share of mango trade in each country (region) from 2011 to 2015

Country/time	2014	2015	2016	2017	2018
Mexico	0.1249	0.1449	0.1442	0.1214	0.1489
Brazil	0.0934	0.0844	0.0778	0.0756	0.0877
Philippines	0.0637	0.0434	0.0334	0.0591	0.0433
Thailand	0.0370	0.0412	0.0389	0.0417	0.0418
India	0.0292	0.0265	0.0274	0.0223	0.0227
Pakistan	0.0180	0.0233	0.0190	0.0264	0.0190
China	0.0018	0.0015	0.0030	0.0035	0.0147

Source: UN Commodity Statistics Database related data to calculate

3.2.2 Trade competition index

Trade Competitiveness index, Trade Competitiveness) is also known as "net export index", "Trade Specialization index" (the Trade Specialization Coefficient, TSC). This indicator is mainly to a certain country a certain commodity

The ratio of the difference in total exports to the total volume of the country's imports and exports is also an indicator of whether a commodity produced in the country is relatively competitive with the same commodity supplied in other countries on the world market. The index also looks at whether imports and exports are a measure of a country's productivity in the international market for a particular commodity.

The specific calculation formula is: $X_{ij} - M_{ij}$

From the above formula: X_j represents the total amount of j country's commodity exports; M_j represents the import amount of j national products, so simply speaking, $x_j - m_j$ represents the total net export of j national products except the total import amount of j national products.

If the calculation result of TC is at $TC > 1$, it indicates that the product of country j is the net export, so it indicates that the product of country j has strong international competitiveness in the international market. According to the results, the closer the value is to 1, the stronger the international competitiveness of the product is. If $TC < 0$, it indicates that the product of country j is a net import, so it indicates that the product of country j has relatively weak international competitiveness in the international market. If the value is close to -1, it means that the product has very weak international competitiveness in the international market. If $TC = 0$, it means that the competitiveness is at an average level; If the value is close to 1, then the table should not be competitive products.

Here, in order to investigate whether Thailand mango trade export has comparative advantages, this paper USES the theoretical method of TC index to show that, from the formula: X_j represents the total export of Thailand mango; M_j represents the import amount of Thailand's mango trade, while $x_j - m_j$ represents the total net export amount of Thailand's mango. That would represent the total import of Thai mango trade.

According to the data in table 3-2, Mexico, Brazil, the Philippines and Thailand are the top four mango exporters in the world. According to the export data, India also shows a trend of high and low. However, in terms of the specific export value, although the export value of mango in India increased from 2011 to 2012, after all, the

export value of mango in India began to decline gradually from 2013 to 2013, which was 44,129, 43,290, 51,939, 48,266 and 47,747. The TC of India has been kept close to 1, so the mango export of India still has strong trade competition and advantages.

According to the data of Pakistan, the TC data from 2011 to 2013 was at 1, and there was a wave movement decline since 2014, but the amplitude was very small, which did not indicate the increase of import quantity, but the import value began to rise. Generally speaking, this product of Pakistan has strong international competitiveness in the international market. According to all the data, the TC data of each country in each year is almost close to 1 on average, so it can be indicated that these countries have strong export competitiveness for this kind of fruit industry.

From 2011 to 2015 on the table the TC index as the main analysis, several of the countries which have to know the order from high to low is in Mexico, Brazil, Pakistan, India, the Philippines and Thailand is said TC number according to almost all close to 1, so this a few countries such fruit trade advantage index is particularly strong, but at the same time, clearly see the Chinese this kind of fruit of TC data finally is less than zero is located in (- 0.6-0, 3) although the rise in 2015, suggests that the export of this kind of fruit is poor, later improved, but from the overall, China's trade in such fruits has a significant export competitiveness disadvantage. All countries with TC close to 1 are really competitors that cannot be underestimated for Thailand. Therefore, in order to account for a larger trade competition index in the future, Thailand has to transform its shortcomings to increase its export capacity of mango trade and become a powerful country.

Table 3-2 mango trade competition index of each country (region) from 2011 to 2015

Country/time	2011	2012	2013	2014	2015
Mexico	0.9682	0.9498	0.9590	0.9688	0.9679
Brazil	0.9998	0.9995	0.9993	0.9992	0.9995
Philippines	0.9976	0.9879	0.9998	0.9999	0.9998
Thailand	0.9697	0.9838	0.9915	0.9843	0.9794
India	0.9996	1	0.9998	1	0.9999
Pakistan	1	1	1	0.9999	0.9992
China	-0.5056	-0.5945	-0.3744	-0.3859	0.2052

Source: UN Commodity Statistics Database related data to calculate

3.2.3 Revealed comparative advantage index

The so-called revealed comparative advantage index refers to the ratio of the export value of a certain commodity in a country's total export value to the total world export value, which is expressed by the formula: $RCA_{ij} = (X_{ij}/X_{tj}) \div (X_{iW}/X_{tW})$

Where, X_{ij} represents the export value of country j 's export product I , and X_{tj} represents the total export value of country j . X_{iW} represents the value of world exports I , and X_{tW} represents the total value of world exports.

Generally speaking, RCA value close to 1 indicates neutral relative comparative benefit, and there is no relative advantage or disadvantage to speak of. RCA value is greater than 1, indicating that the export proportion of this product in the country is greater than that in the world. Then, this product of this country has a comparative advantage in the international market and has certain international competitiveness. RCA value less than 1 indicates that it has no comparative advantage in the international market and its international competitiveness is relatively weak.

Here, in order to investigate whether Thailand mango trade export has comparative advantage and international competitiveness, this paper USES the RCA index theory to analyze, from the formula: X_y represents the value of Thailand mango trade export; The X_{tJ} represents the total value of all Thai exports; Relative to x_j represents the value of the world's export of this product; X_w represents the total value of all the world's traded exports.

According to table 3-3, according to data from 2011-2015 we can see the RCA index of Mexico is still in a steady state, presents some years, but its range is very small, almost always fluctuating between 6 to 7, Mexico's RCA index has been far more than 1, it shows that the international competitiveness of Mexico have been very strong. Brazil also followed Mexico and maintained a relatively high RCA index above 6. Although it showed a slow downward trend, it increased to 7.5 in 2015, which was higher than that of Mexico. Of course, it shows that Brazil has an advantageous position in this industry. Thailand's RCA index has consistently ranked behind Mexico and Brazil, and between 2011 and 2015 Thailand's mango exports ranked fourth behind Mexico, Brazil and the Philippines. The RCA averages in the 2-3 range, which suggests that Thailand's mango export sector is well positioned, although it is a bit different from Mexico's and Brazil's. India's RCA index has been slightly lower than Thailand's, at around 1.5, indicating that India is moderately competitive. On the other hand, China's RCA index has shown an increasing trend since 2014 and increased to 0.1 in 2018, but China's RCA index has been less than 1, indicating that China's export trade competitiveness of this industry is weak.

3.3 Analysis the influencing factor to Thai mango export trade

After analyzing the RCA index of these countries from 2014 to 2018, it can be known that the average of Mexico, Brazil, Thailand and India is relatively balanced. Although the RCA index of Thailand and India is lower than that of Mexico and Brazil, it indicates that the competitiveness of these countries is generally stable. But we found that Pakistan and the Philippines is on the diagram of the data of high status, from it's just a row in the third and seventh exports, but through the formula calculation, the export to the result was very surprising, clearly know the value of the two countries is not so high, only the Philippines is higher than Thailand is in third place.

Thailand RCA index, although takes on a rising trend, but fluctuating amplitude is smaller, the overall competitiveness more smoothly, but still a bit weak, so Thailand needs and learn more strong point of the national development and the successful experience, to provide reference for the development of the mango industry in Thailand, to promote the country mango mouth trade, to the power shift.

Table 3-3 analysis of restriction points of mango export trade in Thailand

Country/time	2014	2015	2016	2017	2018
Mexico	6.4681	7.1799	7.1638	5.7701	6.39
Brazil	6.5947	6.3899	6.0607	6.3420	7.50
Philippines	23.9924	15.3614	11.1272	18.0593	12.0
Thailand	2.9307	3.2999	3.2148	3.4645	3.24
India	1.7539	1.6842	1.5356	1.3253	1.40
Pakistan	12.8553	17.4452	14.3360	20.2130	14.0
China	0.0178	0.0141	0.0259	0.0284	0.10

Source: UN Commodity Statistics Database related data to calculate

To date, there are now about 347,000 mango growers in Thailand, with a total of 2.354 million hectares of mango cultivated throughout the year. Annual output reached millions of tons, but most of the past nearly 80-90% is used for production to provide domestic consumption (DOAE, 2010), now due to Thailand mango began to popular in the world market, export quantity is steady growth in recent years, the production of the nation's 50-60% of the consumption is used to provide the international market, although the export data growth, but not necessarily in this aspect of the Thai exports mango no what restrictions and control points. Therefore, the restrictive factors are as follows:

(1) production factors

Thailand has a great natural advantage in the production of agricultural products or fruits, including not only geographical location, climate and labor force, but what Thailand has not achieved is to be the only country that grows and exports a lot. Here, the analysis of the relevant situation of mango in Thailand shows that the cost of mango production in Thailand is increasing, which not only has an impact on the production process, but also involves the relationship of other factors. Seed prices rise, for example, it also affect the back of the fertilizer and pesticide, the same increase in overall, led to the production of mango or other increases the cost of the whole fruit, fruit price will rise, in the end, will also have to have created a problem and influence to export trade, and impact on their own competitive power output, in addition, the surrounding neighbors countries for Thailand is also cannot look down upon the rival.

a. unstable production.

Mango production in Thailand is in surplus during mango season, but in the period of light season, it is in excess demand. Mango production in this period is not attractive to growers, especially those who are not members of mango growers association. The yield then affects the product mix because mangoes collected from different growers have different qualities and in particular different ripeness levels. In this case, the collection takes more days than usual to fill a well-equipped container. In addition, this problem will further affect post-harvest management and transport handling. In addition, the production volume also affects the product collection, which means that the mangoes collected from different growers have different quality and maturity levels, and the shelf life time is also problematic, which leads to the production volume is not enough to meet the market demand.

b. increased costs for fertilizers, pesticides and agricultural machinery.

Reputation as a result of the Thailand mango famous and has its own characteristics, made in the last few years, the demand for Thailand mans fruit with increases, and in order to avoid shortage situation, thus to raise the production quantity of mango shall not rely on the use of chemical fertilizers and chemical products and machinery to help, at the same time, also to prevent mango growth cycle and so on the infringement and, in addition, using these nor use a lot of, there are a few countries import mango, the use of chemical fertilizers and pesticides is very strict, must be no larger than their designated standard, However, the long-term use of pesticides will do harm to the ecological environment and farmers' health. 2. Due to the development of science and technology, most of the farmers use machines to replace human labor, which not only brings a lot of convenience to the farmers, but also benefits the yield. Overall, production costs have increased, with high quality

fertilizers, pesticides, skilled labor, and freight costs not only in domestic and international markets, among the major obstacles to mango exports.

c. farmers lack technical knowledge.

In addition to a member of the association of planting mango, there are many many growers are lack of knowledge, skills, and a living export anti-season mango production technology, so often produce the quality of the fruit is not in conformity with the provisions, the shelf life of the fruit is short, so the farmers still belongs to the lack of production technology and related knowledge, it will lead to the quality of the products do not conform to the domestic and international consumer demand, to produce will waste.

(2) factors affecting product quality

The quality of mango export is of course very important, such as whether the skin is perfect, the fruit size does not match too big or too small and taste, whether it meets the export regulations, in addition, many growers in Thailand lack the knowledge and skills to produce high-quality products for export. Production hygiene problem. Pollution is one of the most serious problem of mango export, mango, export to every country have bacteria, insects or stain less than international or national standards, if up to more than allowed, Ken will receive a banned imports and to suspend purchase, which not only has influence on the products, and has affected the country's popularity, as well as the product of the trade between the two countries.

1.3.2 The Methods of Research

(1) literature analysis

At the beginning of the topic selection, this paper consulted a large number of research literatures related to mango and export of Thailand. Through comprehensive analysis and sorting through the relevant domestic and foreign research literature, then can find the starting point of this study. Therefore, the use of literature analysis has played a very important role in the thesis.

(2) competitiveness index analysis

In the analysis of the overall competitiveness of Thailand's mango export, this paper USES the competitiveness index analysis, including international market share, RCA index and TC index. By using these indexes, the export status of mango in Thailand can be analyzed to a certain extent, including the strength level of export and the occupation in the international market.

(3) regression analysis

Regression analysis is used to analyze the factors affecting mango export in Thailand. By using regression analysis method, various factors affecting the mango export in Thailand are further analyzed, so as to find out the biggest factors affecting the mango export in Thailand, and then lay an important foundation for the subsequent correlation analysis and research.

3.4 The basic train of thought

In notes of this article is based on porter "diamond model" as the basis, is to choose their own in the domestic demand, the production factor, is associated with mango production and supporting industry, mango industry development strategy, industry structure and the function of the government and opportunity of the list of the five aspects as sample, and with the actual situation and availability of the data filter and combining with the study, at the time of screening influence factor, must be for scientific, industry characteristics and applicability of compliance. First of all, according to the scientific principle, we put forward the requirements to screen objectively the factors related to the export of the same industry. Here, because this paper is mainly to the export trend of domestic mango trade and the reality of the main object of discussion. Secondly, in terms of the principle of suitability, it is necessary to examine and measure its influencing factors in many different aspects. Finally, the principle of operability is to fully analyze and consider the data obtained according to the actual situation, so as to ensure that the data used and speculated are reasonable.

3.5 The factor screening

According to porter's diamond theory, it can be known that the production factors needed in the mango production process in Thailand mainly include land resources, agricultural labor force, agricultural production tools, fertilizer and other agricultural drugs. All of these factors have important influence on mango production in Thailand. Through the analysis of the mango production in Thailand, it can be found that there are many problems and obstacles in the mango production in Thailand, which affect the mango production in Thailand. For example, the quality of the labor force is poor, sometimes there may be a shortage of labor force, the transportation is not convenient, and the added value of the product is low. Especially in the input of labor factors, the mango production and export trade in Thailand are affected to a large extent. Among them, labor factor plays an important fundamental role in the cultivation of mango in Thailand. Based on previous scholars' researches on mango cultivation and the actual

development of mango in Thailand, this paper selects the number of mango workers in Thailand as an important standard to measure the basic conditions of mango production in Thailand.

Porter, he pointed out that a country's internal market demand need is also a demand in the international market as the foundation, porter is emphasized must know in advance how domestic consumer demand, especially the judges and that the consumer demand is higher, because these are also a yearning to industry before the driving force of the development and progress. Then the domestic demand has been improved, which can also produce continuous innovation and progress of the industry, and how to develop the industry in the future. Mango in the international market demand is to expand domestic market of mango, the industry is must have the production levels, product quality and domestic market on the basis of the balance to get a degree there will be an opportunity for, say simply is, to expand the international market, to do well in domestic and have strong competitiveness. Moreover, Thailand's mango export trade and domestic mango product industry and the needs of domestic consumers are closely related. Therefore, in this paper, the domestic consumption of mango in Thailand is selected as the main expression of demand conditions, however, in entering into the analysis of the model.

Porter also believes that the relative and supportive industries are more correlated with the international competitive advantage of an industry. He emphasized to alert the existence of "industrial cluster" sex, that is to say, any one of the comparative advantage of enterprise, it is absolutely cannot exist alone, alone an enterprise should be associated with strong relevant relationship in the competition of enterprise, in brief is a common development together, this will only to the enterprise's overall strength is helpful to improve and promote. As an industry of agricultural products like mango, mango production is also realized by upstream production enterprises, retail and wholesale sales in the process of mango consumption, transportation of mango products, mango product advertising and other industries. In the production and export of mangoes, if the upstream and downstream of the relevant supporting industries have some advantages, it can greatly improve and promote the overall strength of mango export in Thailand. Mango production enterprises are directly and primarily related to the mango industry upstream enterprises, many times throughout the whole mango export process, the export of mango trade in Thailand is of great significance. Therefore, the number of mango production enterprises in Thailand is selected as the explanatory variable.

Porter also believes that the demand of international markets and the pressure of competitors will also give a company the power to improve itself. According to the

current situation, Thailand's domestic mango trade still faces different problems and obstacles in the process of import and export. Therefore, these are the aspects of whether the import of mango products affects the export, so the import amount of Thailand's mango trade is selected as an explanatory variable.

Porter also believes that opportunity and government are also the functions that can be exerted on the four major factors. Opportunity can also be called opportunity, which is a good thing in itself. When it comes to the right time, it does not need to go all out to pursue it. And the Thai government does need to understand its role in the mango industry's development and its responsibilities. With the gradual development of the Thai economy, the mango industry presents both opportunities and challenges. Moreover, as an important pillar industry in the economic development of Thailand, the Thai government is vigorously developing mango production and export trade, thus promoting the external cooperation and international competition of the mango industry in Thailand to increase day by day. Therefore, this paper selects the foreign trade development level of Thailand's mango industry, that is, the proportion of Thailand's mango import and export volume in GDP, as an explanatory variable.

3.6 The selection of sample data

This paper takes the foreign exchange income of mango trade export from Thailand as the dependent variable, denoted as Y; The variable quantity is: domestic demand, which is mainly expressed by domestic mango consumption quantity, denoted by XI; In the enterprise war, the structure is slightly based on competition. The import amount of mango trade in Thailand is mainly screened, denoted as X2. In terms of production factors, it is mainly represented by the number of labor force in mango industry, denoted as X3; Furthermore, the relevant and supporting industries are screened with the planting area of mango products as the representative, denoted as X4; However, in terms of government and opportunity, this paper adopts the formula of measuring the degree of openness of agricultural trade issued by the international monetary fund, namely, taking the ratio of the total import and export of mango products in Thailand to GDP, denoted as X5. (see table 4-1 for the sample data)

Table 3-4 data samples

year	XI	X2	X3	X4	X5	Y
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1996	3.01	6,321	79,304	24.5	0.03	220
1997	2.54	7,016	88,691	25.0	0.09	198
1998	3.61	8,425	96,867	26.1	0.07	260
1999	4.65	37,000	105,423	26.1	0.3	270
2000	2.87	3,747	113,230	28.0	0.03	290
2001	3.77	6,055	123,864	27.9	0.04	320
2002	1.04	2,128	133,699	27.6	0.02	391
2003	2.25	12,436	133,436	29.8	0.09	280
2004	3.01	20,004	133,248	30.2	0.1	391
2005	2.15	106,773	132,817	31.0	0.6	450
2006	3.13	39,234	93,142	28.2	0.2	840
2007	4.57	278,821	124,638	29.8	0.8	3420
2008	7.01	69,532	109,540	30.5	0.2	3740
2009	11.41	89,439	116,552	30.8	0.2	7140
2010	12.46	163,522	132,932	31.1	0.4	8100
2011	15.07	222,061	134,737	33.1	0.4	8300
2012	16.44	289,958	141,994	33.8	0.4	9100
2013	22.05	108,148	140,904	35.0	0.1	9300
2014	31.90	59,195	142,551	35.9	0.06	9410
2015	33.00	117,880	145,274	36.3	0.1	9500

Source: Ministry of Commerce of Thailand, Statistics Bureau of Thailand, Thai Mango Production and Management Committee, etc.

Note: the unit of variable Y is usd 10,000; The unit of variable XI is tons; X2 is in us dollars and the exchange rate from the Thai baht to the us dollar is 34.45 baht; The unit of variable X3 is people; The units of variable X4 are 10,000 square meters; Single variable X5 is %.

3.7 The test of model

3.7.1 The Test stationary of data

The data model of the relationship between international competitiveness and various factors of mango trade in Thailand is shown as follows: Y is equal to f of X1, X2, X3, X4, X5.

(1) In the empirical analysis, this paper takes the logarithmic form of the original data to reduce the role of heteroscedasticity in the data.

Table 3-5 results of stationary test

variable	ADF Statistics	Threshold	Inspection type (c, t, k)	Conclusion
LnX1	-1.103501	-3.502148	(c,t,0)	unstable
LnX2	-1.336540	-3.502148	(c,t,0)	unstable
LnX3	-1.548209	-3.502148	(c,t,0)	unstable
LnX4	-1.341080	-3.708421	(c,t,1)	unstable
LnX5	-1.725489	-3.502148	(c,t,0)	unstable
D(LnX1)	-7.021479	-3.708421	(c,t,0)	steady
D(LnX2)	-4.765208	-3.102546	(c,t,0)	steady
D(LnX3)	-5.642158	-3.708421	(c,t,0)	steady
D(LnX4)	-7.857412	-3.708421	(c,t,0)	steady
D(LnX5)	-6.121025	-3.708421	(c,t,0)	steady

(2) D is a first order difference.

According to the results of stationarity test in table 3-5, the sequence after taking the logarithm of each element is not stationary. All the first-order differences have passed the stationarity test at the 5% significance level. Therefore, the co-integration test can be carried out on the data. If the co-integration test of the data passes successfully, the regression equation can be established for research.

3.7.2 Co-integration test

Co-integration test is used to see whether there is a long-term stable relationship between time series. If the linear combination of two or more non-stationary time series of the same order of single integration is a stationary time series, it indicates that these elements have passed the co-integration test, that is to say, there is a long-term equilibrium and stable relationship between variables.

According to the test results in table 3-6, there is indeed a co-integration relationship between variables. Therefore, there is a long-term stable equilibrium relationship between variables, which can be used for further regression analysis.

Table 3-6 results of co-integration test

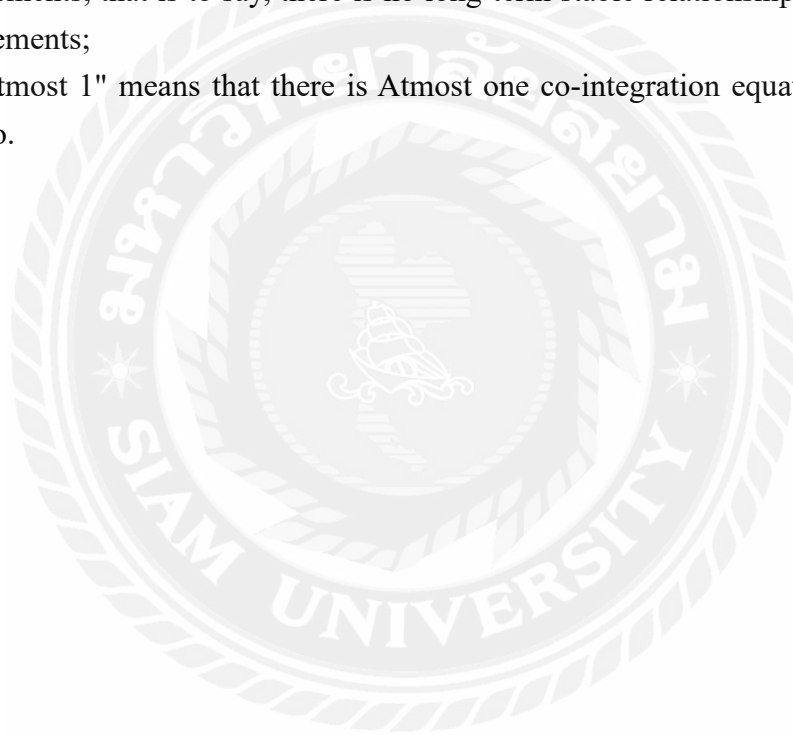
Hypothesized NO.of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Pro**
None*	0.979821	177.8651	79.25410	0.0000

At most 1*	0.901354	89.00254	61.15847	0.0001
At most 2*	0.598741	42.03547	39.09541	0.0364
At most 3*	0.612547	30.54782	29.15478	0.0300
At most 4*	0.401247	13.85471	19.32104	0.0384
At most 5*	0.205687	4.012450	3.041503	0.0457

LNY	LNX1	LNX1	LNX1	LNX1	LNX1
1.000000	-4.768410	0.395142	3.882145	-1.865420	1.336048
		9	(0.81021)	(0.79632)	(0.70154)

Note: "None" means that there is no co-integration relationship between the two elements, that is to say, there is no long-term stable relationship between the two elements;

"Atmost 1" means that there is Atmost one co-integration equation between the two.



Chapter 4

An Empirical analysis

4.1 Regression analysis

According to the results of table 4-1, the Prob (f-statistic) of the regression equation after fitting was $0.0010 < 0.05$.

The regression equation is significant on the whole. The p-value of t-statistics in the significance test of coefficient is less than 0.05 except for variable 3. The following is to remove the variable X_3 and carry out the regression analysis again. The regression results are shown in table 4-5.

The Prob (f-statistic) of the regression equation after fitting was $0.003 < 0.05$, indicating that the regression equation as a whole

Significantly; The P values of T-Statistics were all less than 0.05. R^2 was 0.990197 and the adjusted R^2 was 0.993705, indicating that the overall fitting degree of the model was good. The value of D.W is 1.9885316, indicating the equation

There is no sequence correlation. The fitting regression equation is:

Table 4-1 Results of regression analysis

Variable	Coefficient	Std.Error	t-Statistic	Prob
C	-12.569204	1.720681	-8.325961	0.0001
SERO1	0.312571	0.042186	3.451208	0.0030
SERO2	-0.365018	0.231458	-2.365480	0.0054
SERO3	0.012754	0.215901	0.185279	0.7931
SERO4	-0.495218	0.115247	-3.954820	0.0007
SERO5	0.642219	0.175230	3.995246	0.0029
R-squared	0.995201		Mean dependent var	7.120530
Adjusted R-squared	0.980725		S.D. dependent var	0.602147
S.E.of regression	0.073059		Akaike info criterion	-2.521043
Sum squared resid	0.049361		Schwarz criterion	-2.206480
Log likelihood	27.63240		Hannan-Quinn	-2.395471

		criter	
F-statistic	291.8620	Durbin-Watson stat	2.039501
Prob(F-statistic)	0.0010		

Table 4-2 Results of regression analysis

Variable	Coefficient	Std.Error	t-Statistic	Prob
C	-11.70681	1.298730	-9.563106	0.0256
SERO1	-0.170371	0.049189	3.991047	0.0023
SERO2	-0.263015	0.231458	-3.590141	0.0021
SERO3	0.401340	0.107451	-3.590141	0.7902
SERO4	0.401340	0.157022	-4.590181	0.0023
SERO5	0.7315601	0.126590	5.798361	0.0009
R-squared	0.990797		Mean dependent var	6.923120
Adjusted R-squared	0.993705		S.D. dependent var	0.496701
S.E.of regression	0.037985		Akaike info criterion	-2.698431
Sum squared resid	0.039999		Schwarz criterion	-1.217314
Log likelihood	31.88930		Hannan-Quinn criter	-2.417652
F-statistic	6417832		Durbin-Watson stat	1.985316
Prob(F-statistic)	0.0031			

4.2 The analysis of result

Through comprehensive observation and analysis, the final fitted linear regression equation was: $\ln Y = -11.70681 - 0.170371 \ln X_1 - 0.263015 \ln X_2 + 0.401340 \ln X_4 + 0.731560 \ln X_5$

It can be seen that the coefficients of explanatory variable X_4 and explanatory variable X_5 are 0.401340 and 0.731560 respectively.

Both of these coefficients are positive. It can be seen that there is a positive correlation between the foreign exchange income of Thailand's mango product export and the domestic mango planting area and the openness of Thailand's mango product trade. The coefficients of the explanatory variable X_1 and the explanatory variable X_2 are -0.170371 and -0.2630151 respectively, both of which are negative. It can be seen that there is a negative correlation between the foreign exchange income from the export of mango products in Thailand and the import amount of mango and the consumption amount of mango in Thailand. Meanwhile, there is no long-term stable relationship between the labor force from the mango industry in Thailand. So it can be said that the increase of mango planting area in Thailand and the greater openness of mango product trade in Thailand will promote the overall development of mango export in Thailand. With the increase of mango import and domestic consumption in Thailand, the export of mango will be hindered to some extent.

Since the coefficients of the above four explanatory variables X_1 , X_2 , X_3 and X_4 are all taken as absolute values, the results are as follows: $0.731560 > 0.401340 > 0.2630151 > 0.170371$. So, in single factor

Under the influence, the order of the influence degree of various variables on the overall export competitiveness of Thai mango from high to low is: the openness of Thai mango market, the planting area of Thai mango, the import amount of Thai mango trade, the consumption amount of Thai mango in the domestic market, and the labor force in the mango industry. Specific analysis is as follows:

Firstly, according to the results, the openness of the market has played a direct role in the export of mango products in Thailand. This is mainly because the coefficient absolute value of X_5 is 0.731560, ranking the highest among the four explanatory variables. So with the increase of mango production in Thailand, the extent of mango market opening is further expanded. Especially, with the development of Thailand's overall economy and the expansion of Thailand's agricultural products and food export scale, the comprehensive competitiveness of Thailand's agricultural products and food export has been improved, and the external conditions of Thailand's mango products trade and export have been optimized, so as to provide broader space and more development opportunities for the domestic mango industry.

Secondly, mango consumption in Thailand is negatively correlated with mango export. This is mainly because the coefficient of X_1 in the analysis results is -0.170371. This is mainly because Thailand is able to produce a certain amount of mango per

year, and the annual increase is relatively limited. Therefore, on the premise of total product changes or promotion is small, Thailand mango, the increase of the number of domestic consumption, is bound to in a certain extent, reduce the export scale Thailand mango, which will be in a certain extent reduce the total exports of Thailand mango fruit, reduce Thailand by mango export to create the ability of foreign exchange. However, the negative correlation between the amount of mango consumed in Thailand and the amount of mango exported is not constant, and this negative correlation is likely to change. That is, the overall production of mangoes in Thailand continues to increase dramatically

Under the premise of addition, it is very possible to alleviate the negative correlation to some extent. Furthermore, from the table shown in the above data results, it can be said that the relevant supporting industries are also an important factor directly affecting the export aspect. As an important factor of mango product cultivation, the number of industrial labor force in the relevant supporting industry of mango industry development in Thailand also affects the development of mango export trade to a certain extent. However, in this study, it is found that there is no necessary long-term correlation between the changes in the number of mango workers and the total export volume of mangoes from Thailand. This is mainly because the P value of t-statistics variable X_3 is greater than 0.05 in the coefficient significance test of the regression equation after fitting for the first time, so it is excluded. This also indicates that the quantity of labor has a relatively small impact on mango production and export. The author thinks that the overall quality of labor force is the important reason that really affects the production and export of mango. Therefore, in order to improve the export capacity and overall export competitiveness of Thai mango products, Thailand should strengthen the overall quality of Thai mango labor force, so as to fundamentally further promote the competitiveness of Thai mango products export.

Then, there is an important positive relationship between mango planting area in Thailand and mango export trade in Thailand. This is mainly because the coefficient of X_4 in the fitting equation of the analysis result is 0.401340, which is a positive number. Therefore, it can be seen from the positive relationship between the two that with the increase of the overall planting area of Thai mango, the overall production scale of Thai mango will also expand and the marginal cost will also decrease to a certain extent, which can reduce the overall cost of Thai mango production to a certain extent. Therefore, it can be inferred that the further expansion of mango planting area in Thailand can promote the further development of mango export trade in Thailand to a certain extent.

Finally, there is a negative correlation between the import amount of mango in Thailand and the export of mango. This is because the coefficient of X_2 in the fitted linear regression equation is -0.2630151, which is a negative number. In addition, the reason why Thailand has to import a part of mango indicates that the varieties of mango imported by Thailand are relatively rare or relatively scarce in Thailand, so it can be seen that Thailand is not comprehensive in mango production, and its mango production capacity needs to be improved. If Thailand imports more and more mangoes, the larger the size of the mangoes it imports, then Thailand's ability to export mangoes is weakening. It can also be inferred that there is a certain negative correlation between the import amount of mango in Thailand and the export of mango.



Chapter 5 Conclusion

5.1 Conclusion

Thailand is a country capable of producing a wide range of high-quality agricultural products and has a long history of fruit production. Despite the variety of tropical fruits that can be grown in Thailand, mango is still one of the most popular fruits today. In recent years, Thailand's mango cultivation industry has shown an upward development trend. However, in recent years, with the increasing popularity of Thai mango, the export scale of Thai mango shows a gradual growth Potential.

Through the use of competitiveness index and regression analysis, this paper analyzes and evaluates the overall export competitiveness of Thai mango, and analyzes the status, competitiveness, main factors affecting the export of Thai mango in the international market and the future development trend. Through relevant research, this paper draws the following conclusions:

(1) through the international market competitiveness index of products, this paper studies the trade export level of Thai mango, and makes a comprehensive comparison with other mango export powers, so as to explore the overall competitive strength of Thai mango and the overall position of Thai mango in the international market. Here, the three main indicators adopted in this paper are international market share (MS), trade competitiveness index (TC) and indicative comparative advantage index (RCA). By calculating three indicators, the results show that in the international mango market, the overall export capacity of Thai mango is significantly lower than Mexico, Brazil and the Philippines, ranking fourth. Although Thailand mango export international competitiveness as a whole is lower than this a few countries, but from the perspective of the data of three indicators, Thailand mango trade export competitiveness in the international market is relatively strong, and the fluctuation is relatively small, the strength of the competitiveness and overall competitiveness situation to see, is relatively stable, but overall there is a sign of relative weakness. Therefore, the author thinks that Thailand mango still needs to learn development experience from some countries with relatively strong international competitiveness in order to provide reference for the development of Thailand mango industry and further promote the whole export trade of Thailand mango.

(2) in this paper is based on porter's "diamond model" as the main basis, to carries on the discussion and analysis, and according to the actual situation of screening indicators to do combination analysis, here, according to the analysis results can be

obtained in this four explanatory variables of the X_1 , X_2 , X_4 , X_5 respectively take the absolute value of coefficients after the size of the relationship between the result of the situation is: $0.731560 > 0.401340 > 0.2630151 > 0.170371$. In other words,

The influence degree of various variables on the overall export competitiveness of Thai mango is ranked from high to low as follows: the openness of Thai mango market, the planting area of Thai mango, the import amount of Thai mango trade, the domestic consumption amount of Thai mango, and the number of mango working labor force. It can be seen that the highest degree of influence on the overall export competitiveness of Thai mango is the openness of Thai mango market. Therefore, with the increase of mango production in Thailand, the further expansion of mango market openness. Especially, with the development of Thailand's overall economy and the expansion of Thailand's agricultural products and food export scale, the comprehensive competitiveness of Thailand's agricultural products and food export has been improved, and the external conditions of Thailand's mango products trade and export have been expanded and optimized, providing a broader space and more opportunities for Thailand.

(3) in this paper, according to the degree of the impact of factors to rank, put forward to further promote Thailand's mango trade export countermeasures and Suggestions. For example, by strengthening the efficiency of mango production management system in various aspects, promoting the development of agricultural science and technology, developing new varieties, improving the promotion of mango marketing in Thailand and expanding sales channels, etc., we can expand the openness of the mango market in Thailand, improve and promote the overall export competitiveness of mango products in Thailand.

Anyhow, Thailand mango is export trade still has great competitive power, but at the same time still faces some difficulties and problems, only to have trouble and problems, learn from the strong national successful experience, so as to provide reference and reference for the development of the mango industry in Thailand, to promote the competitive power of Thailand mango export trade, export trade Thailand mango ability improving, exports to mango power shift.

5.2 Outlook

Anywhere in the world, planting mango, mango and consumption of costa rica hopes to use the advantage of the quarter, let mango listed as soon as possible, but today's Latin America mango production is still low, compared with a year ago in

Oceania, Australia forecast demand mango international market increases, Indonesia, Pakistan, Bangladesh market demand increase to mango also optimistic. The Middle East is the main market for mangoes. Kenya is preparing to export more mangoes to the global market, and Israel is preparing to export more mangoes to the European market, where prices are high and Easter demand is high, but the current market demand is low.

As we all know, Thailand is often called the "king of tropical fruits" country. Thailand has a strong strength in fruit export and is an important pillar of the Thai economy, while mango is also one of the main fruits exported by Thailand. Mango is also a big crop in Thailand. At one time about 90% of Thai mango production was used for domestic consumption and the rest for the international market. At present, due to the development of science and technology as well as the open relationship between the trade and the country, Thailand has increased a lot of mango production, so Thai mango is also becoming more and more popular in the international market. So now, 60 percent of Thailand's mango production is for international consumption, and the remaining 40 percent is for domestic consumption. Moreover, Thai mango has the characteristics of mango itself, that is, the flesh of the fruit is very delicate, the flavor is unique, and it is full of rich nutrition. As a result, today Thai mango is not only famous in Asia, but also more and more popular in European and American markets. Thai mango trade exports are not only fresh mango, in addition, there are products for export mango processing.

The main export objects or partners of Thai mango are Japan, South Korea, Vietnam, China, New Zealand, the United States and European Union countries. According to the data in figure 2-6, in recent years, South Korea imports mangoes from Thailand in the largest scale, followed by Japan and China. Although there was a gradual decline trend from 2012, there was an increase in volatility in 2013, and Japan was similar to South Korea. In addition, due to the unique flavor and rich nutrition of Thai mango, it can be seen that the scale of export to the united Arab emirates and Singapore is gradually increasing, which indicates that in addition to the above countries, these two countries are the markets for new export of mango to Thailand. Table 2-5 shows the quantity and value of mango exported from Thailand. Exports since 2011 have to 63807496 kilograms, also have the opportunity to grow at the same time, exports in 2014 reached 79622890 kg, by 2015, while the export quantity a little bit lower, this would be a lot of factors to cause the loss of exports, such as: increase in the cost of chemical fertilizers and pesticides, increase in the cost of the machine cost and labor cost of employment and factors such as natural disasters to Thailand mango prices fluctuate and falling exports, although the decline had, but

does not represent Thailand mango don't stand a chance of growth. So far, the development of mango industry is also getting more and more attention from countries and regions in the world. Mango is also a fast-growing industry. At present in the production of mango major countries in the world are India, China, Thailand, Indonesia, Pakistan, Mexico, Brazil, Bangladesh, Nigeria and the Philippines, production of 15188000 kg, 4350000 kg, 2600000 kg, 2131139 kg, 1888449 kg, 1827314 kg, 1249521 kg, 889176 kg, 850000 kg, 800551. Thai mango is one of the famous tropical fruits, because of its own flesh is very delicate, with relish, and full of flavor of the unique, in addition, also has a relatively rich nutrition, so not only by the domestic consumers, but also very popular with foreign consumers and love. Although there are numerous varieties of mangoes in Thailand, among the varieties of mangoes popular with Thai consumers are the following:

Green mango. It is one of the most popular mango varieties grown in Thailand. Compared with other kinds of mango, this kind of mango sells at the highest price and is popular with consumers. This green-skinned mango is characterized by its ability to be eaten before it is ripe and resistant to diseases and insects. The time from flowering to ripening is about 105-110 days. The shape of fruit is oval and long, the head is a little thick, and the average weight is about 350 grams. The flesh of immature fruit is white and delicate, while that of mature fruit is yellow, sweet and delicious.

Dolan mei mango. Doramay mango is one of the most popular mango varieties in Thailand. This mango is perfectly ripe, so you need the fruit to be near full ripeness. This species can be grown all year round. It is also the main type of mango exported from Thailand. For its own good Many, not only has the meat quality series and tender, fruit itself has a high degree of sweetness and juicy, but also a full range of nutrients and vitamins, so no doubt in the export market by a large number of foreign consumers love and welcome. The fruit is round and long, with a short tail and thin skin. The average weight of each dolamey mango is about 400g. In addition, the Thai people also created a very famous dessert is "mango glutinous rice" and then the dessert is the use of dolan mei mango with glutinous rice, add the coconut milk, resulting in a good taste and taste, sweetness is not high and not greasy, really well received.

Mangoes with hundreds of flowers. This kind of mango has a large fruit yield. Before Thai people are to use mango of 100 flowers to go up with glutinous rice to go up to eat together, but what edible dolan mei mango now is in the majority. The mango is rectangular in shape and small in size. This mango has pale green skin color and yellowish flesh. When ripe, its taste is sweet and mild, containing a lot of fiber.

The average mango weighs about 250 grams. The mango is delicious when fully ripe and sells for a high price in the market.

Red mango. This is a light mango variety, which has strong resistance to the surrounding environment, diseases and insects. It blooms all year round and produces a high yield. The time from blossom to harvest is about 93 days. This kind of mango tastes sour and cannot be eaten alone. It needs to be served with dishes. The overall shape of the fruit is round, with a large head and a small pointed tail. The average weight of each fruit is about 300g.

French mango. This mango is a green-skinned mango, which bears a lot of fruits, which are round in shape, with dark green skin and rough skin, white inner flesh, and very delicate.

Mahakano mango. The mango likes a cool climate to enhance its red colour on the skin, and the fruit is oblong in shape with curved and tapering tips. The skin is thick, bright yellow, sometimes pink, the flesh is yellow, juicy and fibrous, with a strong aromatic aroma when ripe, the weight of the fruit is about 350 grams to 400 grams. It is one of the most widely used varieties of processed mangoes. Thailand not only exports fresh mangoes, but also processes and exports mangoes according to factory specifications. The four seasons mountain. This variety of mango is very popular in Thailand. It grows all year round. So Thai farmers like the mango. Because it produces fruit all year round, bringing income to farmers. It takes about 110 days from flowering to harvest, and its fruit is oval and long. When ripe, it has a light green rind and a light taste. When ripe, the rind is golden or yellow in color, firm and fibrous, sweet or sour, with a pleasant aroma. The average weight of the fruit is between 300g and 400g. And it's also a processed mango.

Black and gold mango. This type of mango is very resistant to pests and diseases. It takes about 100-105 days from flowering to ripening. The mango can be eaten both when it is immature and when it is ripe, and it blooms all year round, making it a productive fruit with an average fruit weight of about 350 grams.

First of all, Thai fruit has geographical and climatic conditions. Thailand's geographical location and climatic conditions are suitable for growing a variety of tropical fruits. Because each region is affected by the monsoon, it has the characteristics of a regional tropical climate and Thailand's land resources are also abundant. Therefore, most tropical fruits in Thailand can be harvested throughout the

year. It has great potential in the development of large-scale planting scale and the development of the fruit industry.

Secondly in the production process. Thailand has a good irrigation system and is good for growing a variety of tropical fruits. The government has introduced various support policies for the production and export of Thai fruit. Its policies are distributed in many fruit-growing areas, for example, because of the distribution of durians in many areas, it can be harvested throughout the year. At present, Thailand applies agricultural technology, vigorously develops fruit production, and succeeds in improving anti-season fruits. The production of Thai fruits has also increased rapidly.

Finally, Thai tropical fruit has a unique flavor. There are many varieties of tropical fruits in Thailand, the most famous of which are Quanlian, Longan and Mangosteen. A variety of fruits have different flavors, unique flavors, sweet and sour, and nutritious. Therefore, Thai fruit is warmly welcomed in China.

Therefore, as long as you are prepared to face the changing climate of Thailand every year, the fruit production in Thailand will be unstable. If the climate is not good in some years, such as too dry in the dry season, the reservoir will be low, which will result in insufficient water for agriculture in some areas. If there is no rainfall or excessive rainfall for a long time, drought or flooding may occur. The floods in Thailand directly led to a decline in the production of durian, mangosteen, rambutan and longan. The unstable climate of the year will cause great damage to the fruit yield and quality of Thailand.

Secondly, there are not many Thais who speak Mandarin. Therefore, when Thai fruit exporters have problems with language barriers when they contact Chinese importers, the competitive position of Thai fruit in international merchandise trade will remain high.

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