CHALLENGES OF COMPETING IN THAI DURIAN MARKET IN CHANTABURI PROVINCE IN THE AGE OF "CHINESE CONSUMERISM"

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Abstract

The research in the challenges of competing in Thai durian market in Chantaburi province in the age of "Chinese consumerism" is aimed to 1) study general information, farmer characteristics, marketing mix factors and competitive advantage, 2) compare the competitive advantage of the durian market in Chantaburi Province categorized by general information, 3) compare the competitive advantage of the durian market in Chantaburi Province categorized by farmer characteristics and 4) study the marketing mix factors affecting competitive advantage of the durian market in Chantaburi Province categorized by farmer characteristics. Questionnaires were used as tools for collecting data

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from 400 durian growers in Chantaburi Province. Descriptive statistics was used for population data. Inferential statistics; ANOVA Test, Multiple Regression Analysis, was used for data analysis. The results show that 61.30% of the respondents are male. 37.8% are over 35 years old. 30.80% obtain the level of education in secondary school and vocational certificate. 35.70% have more than 1 million Baht annual income. 42.00% of the durian plantation areas are sloping areas. 27.70% or the majority of the durian cultivated are Mon Thong. Sales, profits and production in 2018-2019 were reduced from 2017 55.30%, 63.70% and 52.50% respectively. The results of the testing showed that differences in education levels, annual income, characteristics of durian plantation areas, durian varieties affect the competitive advantages of Thai durian market in Chantaburi Province differently. According to multiple regression analysis results, the predictive power is 12.00%(R2 = 0.12), the standard error of the forecast is 0.528%. The best forecasting variable affecting the competitive advantage of the Thai durian market in Chantaburi Province with statistical significance at the level of 0.05 are four variables. Price (X2) and workers in the plantation (X6) give a positive effect, whereas the durian plantation area factor (X5), marketing promotion (X4) give a negative effect. The variables that do not affect the competitive advantage are the product (X1) and the distribution channel (X3). The study shows that the sample places a high level of importance on product strategy; therefore, farmers should increase the variety, and the quality of durians more than price strategy. The price should be set appropriately, and the distribution channel should be increased to reduce the risk from the bargaining power of the durian buyer.

Keywords: Competitive Advantage, Thai Durian Market, Thai Durian in Chantaburi Province

Introduction

Thai durian has become an agricultural fruit with a significant amount of product value and export value of the country. In 2017, the production of Thai durian stood at 23.70 percent of the total value of fruit or approximately 3,963.10 million baht. The average growth of durian values in the last five years has increased by 21.20 percent per year, in accordance with the increasing popularity of durian consumption among Chinese people at present. Durian production in the central and eastern regions has a total area of 262,543 Rai or 43.40% of the total durian plantation area throughout the country, particularly in Chantaburi province. (Benjapruk, 2019). The foreign markets, especially the People's Republic of China market which is the main market, have higher demand for fresh durian from Thailand. The price of Monthong durians during 2009-2013 increased from 21.52 Baht per kilogram in 2009 to 39.90 Baht per kilogram in 2013, or 15.46% increase per year. The price of Chanee durians increased from 12.89 baht per kilogram in 2009 to 15.15 baht per kilogram in 2013 or increased by 6.91% each year. 2009-2013 the price increased from 16.06 baht per kilogram in 2009 to 18.32 baht per kilogram in 2013 or increased by 2.59% (Office of Agricultural Economics, 2015)

Durian is more than 50% of the country's total products and especially durians from the eastern region, such as Chantaburi, Rayong and Trat, will go to the market at the same time during 2-3 weeks of mid harvest season which is May - beginning of June. The durian sales price drop since there are excessive products within the market with an inefficient market mechanism, lack of strong measures in releasing the products out of the exported area causing the price to continuously fall. In addition, the problem of exporting unripe durians by exporters that lack knowledge, expertise and professional responsibility causes trade partners in foreign markets to not accept products by raising non-tariff barrier issues, such as hygiene, disease, pesticides and toxic residues. This leads to loss among entrepreneurs. In order to solve the problem, the entrepreneurs lower the purchase price to the lowest in the middle of the production season. This situation annually occurs.

The researcher suggests that farmers should be more careful in cutting durian for sale, choosing Chinese middlemen to sell durians to, the quality of durians that meet the demand of the market, not offering unripe durians for sale, selecting middlemen with knowledge, not the middlemen who look for excessive profits, otherwise the farmers will be damaged and affect other farmers. However, it is currently considered the golden age of the Thai durian market in Chantaburi province with competitive advantages that can be further developed. If there is an analysis of the Thai durian marketing mix that affects the competitive advantage of the Durian market, Chantaburi Province, it will be able to be used as a guideline in promoting and developing Thai Durian market in the future.

Research Objectives

1. To study general information, farmer characteristics, marketing mix factors and competitive advantage of durian growers in Chantaburi Province.

2. To compare the competitive advantage of the durian market in Chantaburi Province categorized by general information.

3. To compare the competitive advantage of the durian market in Chantaburi Province categorized by farmer characteristics.

4. To study the marketing mix factors affecting competitive advantage of the durian market in Chantaburi Province categorized by farmer characteristics.
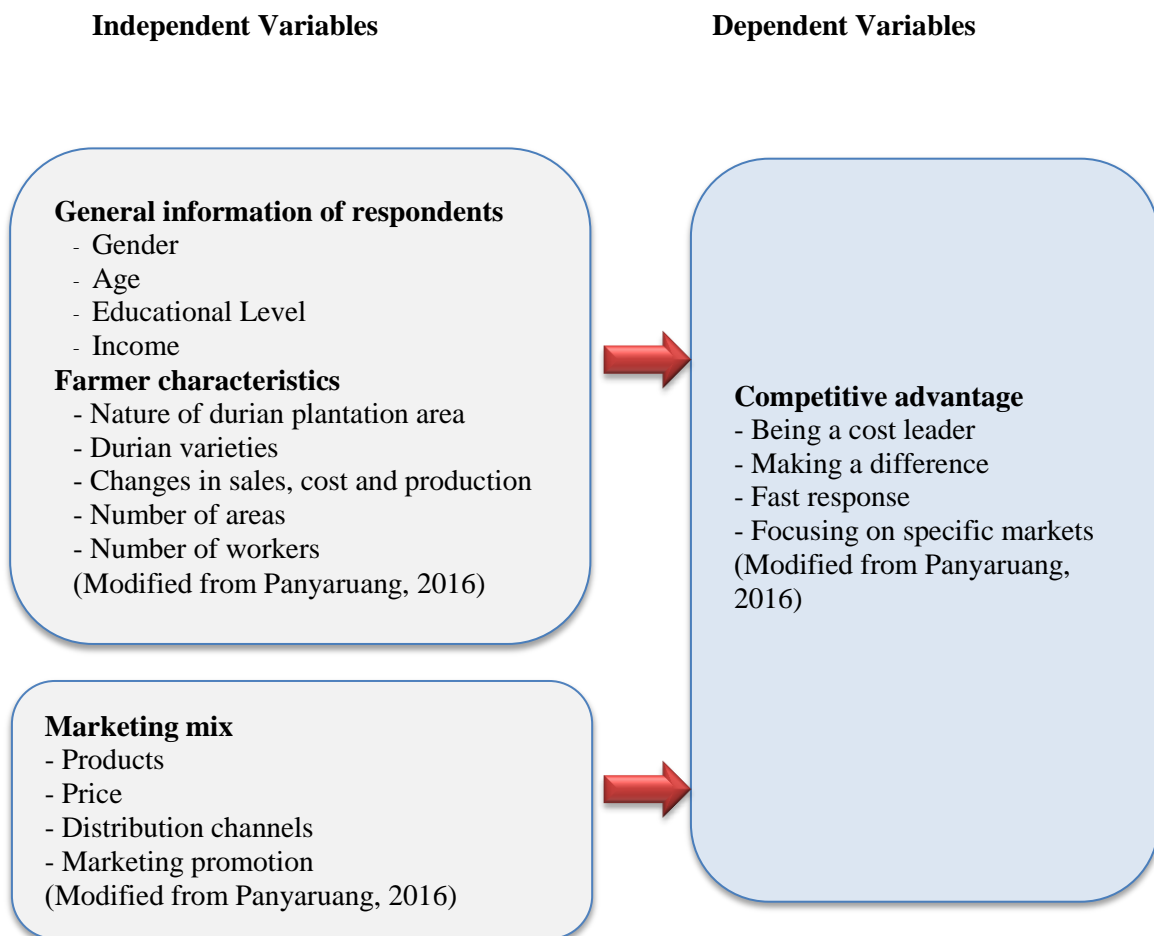
Research Hypotheses

Hypothesis 1. Farmer with different general information has different competitive advantage of the durian market in Chantaburi Province.

Hypothesis 2. Farmer with different farmer characteristics has different competitive advantage of the durian market in Chantaburi Province.

Hypothesis 3. Marketing mix factors affecting competitive advantage of the durian market in Chantaburi Province.

Conceptual Framework

Independent Variables   **Dependent Variables**

General information of respondents
- Gender
- Age
- Educational Level
- Income

Farmer characteristics
- Nature of durian plantation area
- Durian varieties
- Changes in sales, cost and production
- Number of areas
- Number of workers
(Modified from Panyaruang, 2016)

Competitive advantage
- Being a cost leader
- Making a difference
- Fast response
- Focusing on specific markets
(Modified from Panyaruang, 2016)

Marketing mix
- Products
- Price
- Distribution channels
- Marketing promotion
(Modified from Panyaruang, 2016)

Concepts and Theories

Marketing Mix Concepts and Strategies

Marketing mix is one of the important concepts in marketing. In order to satisfy customers, marketers use marketing mixes as tools for development in line with the target market. From the study, many scholars defined the meaning of marketing, which consist of quality, service and cost. Value is a comparison between benefits and costs. Some customers choose to buy because of good quality or reasonable price. Some people buy products by comparing its quality and its prices which can be written as a ratio = Value = Benefit / Cost. Value can be added by adding benefits or decreasing costs, or both.

The American Marketing Association has defined the meaning of "marketing" as the planning process and implementing concepts, prices, promotion and distribution of products and service to create satisfaction to consumers and producers. There are four marketing elements for the value chain: the right target or getting closer to customers, specific needs of the customers, cost saving but creating value for customers, and convenience that customers will be able to buy products wherever and whenever they want. Every marketing activity must be able to monitor and measure by applying two-way communication with customers (Anthachai, 2015)

Marketing mix theory is a marketing factor in order to meet the needs and satisfaction of the target customers and to encourage the target group to demand for their products and services. The theory consists of four components or 4Ps.

1. Product means products offered for sale by business in order to meet the needs of customers and to satisfy them. They can be tangible or intangible. They can be both goods and services that offer utility and value in the customer's sense so that they can be purchased.

2. Price means the amount of money that is necessary to pay in exchange to get a product. It is product value in monetary form and is the cost of customers. Consumers compare the value of the product with the price of the product. If the value is higher than the price, consumers will make a purchase.

3. Place means the structure of the channel that consists of institutions and activities used to move products and services from the manufacturer to the target consumer. Marketing activity institution help with the distribution of goods, including transportation and storage of inventory.

4. Marketing Promotion is a communication tool to create satisfaction for the brand or service or idea or to the person by using motivation to create a desire to think of the product as it influences the feelings, beliefs and buying behavior. It is also a communication and information exchange between the seller and the buyer to create an attitude and buying behavior. Communication help salespeople to make sales. There are several communication tools available to be appropriately chosen based on customers, products and competing products (Serirat, 2016).

Marketing mix means integration, especially important variables under the control of an organization that can be used to create demand and gain competitive advantages. These variables are

products, channels, marketing promotions, and prices. These variables have sub-elements that can be analyzed for optimization and the capability of the organization (Wheelen and Hunger, 2016)

Competitive Advantage Concepts and Theories

Competitive advantage refers to the relationship between the goal of the business and the method to reach its goal. The relationship can create a competitive advantage or value that has more impact on customer satisfaction than other business competitors (Nawakarn, 2016)

Applying competitive advantage makes the business be in a position that is superior to its competitors. It must be appropriately chosen to suit the global changes, the resources and business readiness. There are three competitive advantage strategies.

1. Cost leadership is a benefit when having a lower cost. However, the cost reduction still has hidden risks, such as outdated processes or innovations or services and product distribution while competitors may have more modern innovations. Moreover, reducing the cost may affect customer awareness which may lead to an imitation, because the profit of the business is equal to the sales price - the cost of sales. Therefore, there are two options to obtain higher profit, increasing sales price and / or reducing cost of sales. Most successful organizations choose to reduce costs rather than increase sales prices which is to increase effectiveness.

2. Making a difference means creating value in products and services to be different from other competitors which is a strategy that should be developed. The value in the past may no longer be accepted by consumers due to high competition in the market. The products and services in the market are currently similar. The organization must, therefore, create products and services that are different from competitors in order to meet the needs of the customers.

3. Market Focus is a strategy that the organization apply to meet the needs of the market that has complete differences in demand for products, product styles, colors, quality, and expectations. Therefore, conducting business by applying the same business strategy in every market is an inappropriate business practice (Porter, 1985).

Literature Reviews

Detpuang and Chaiprasit (2018) studied the relationship between internal and external factors affecting the export of durian to the People's Republic of China which is a quantitative research with the objectives (1) to study the domestic factors affecting the export of durian to China (2) to study the external factors that affect the export of durian to China (3) to increase the export potential to be more efficient and increase the value in durian products. Population and sample groups were the total amount of durian product export volume, internal and external factors affecting the quantity of durian exports based on annual secondary data from 2006 to 2015. Data were analyzed by multiple regression model and ordinary Least Squares (OLS). The research found that the factors in this model can explain the changes in the amount of durian exports to China by 90.21 percent. The most effective

factors are gross domestic product in China, followed by export price (F.O.B) of Thai durian, Thai durian products, foreign exchange rates, and the value of imports of durian in China. The results of this study support policymakers or relevant government agencies to reform the agricultural economy structure, marketing structure, look for a new export market, increase product use, add value to the product, maintain efficiency and increase the potential in order to be the world's number one exporter of durian.

Panyasai (2017) studied the development of needs of Long-Lublae durian business lesson for agricultural entrepreneurs in Uttaradit Province. The purpose of this research was to develop the learning process of the Long-Lublae durian entrepreneurs in Uttaradit. The samples, specifically and voluntarily selected, were Long-Lublae durian farmers and their offspring in Uttaradit. The sample group included 30 samples for collecting the data regarding Long-Lublae durian business. 10 samples for in-depth interviews, and 22 samples for the experimental methods. 11 of the samples are Long-Lublae durian farmers and 11 of their offspring were studying at Rajabhat Uttaradit University. The tools used in the research consisted of a survey of needs of Long-Lublae durian business lesson for agricultural entrepreneurs and in-depth interview

Panyaruang (2016) studies the management of competitive advantage for the successful operation of SMEs in the northern region of Thailand. He was interested in studying the competitive advantages and operational success of SMEs in the northern region of Thailand, the relationships, and the impacts of competitive advantage on the business success of SMEs in the northern region of Thailand. The sample group consisted of 400 SMEs in the northern region of Thailand, namely Chiang Rai, Chiang Mai, Nan, Phayao, Phrae, Mae Hong Son, Lampang, Lamphun and Tak. It was found that SME entrepreneurs in the northern region of Thailand have a high level of opinion about the competitive advantage and the success of their operations. Whereas, the relationship and impact, it was found that Competitive advantage in terms of differentiation, cost, leadership, quick response, and market focus are related and give a positive impact on overall operational success. It was suggested that further researches should be conducted with other business groups and studied the impact or other factors that affect the success of the operation

Data Collection

1. Primary Data is data collected from 400 questionnaires from the population in Chantaburi province in 2019.

2. Secondary Data is data obtained from data sources that have been collected and used in the past, such as documents, textbooks, concepts, theories and related researches, including data on the internet.

Reliability Test

By testing reliability from the questionnaires that were tried out in 30 people, the result of reliability was 0.70

Statistics used in data analysis

This research statistically analyzed data by descriptive statistics, frequency, percentage, mean and standard deviation to analyze personal factors of the sample. Inferential Statistic, such as ANOVA Test, Multiple Regression Analysis, were used to analyze the data.

Research Result

Table 1 Number and percentage of respondents by gender

Gender	Number (person)	Percentage
Male	245	61.30
Female	155	38.70
Total	**400**	**100.00**

Table 1 shows that most of the respondents are 245 male or 61.30% and 155 female or 38.70% of the total respondents.

Table 2 Number and Percentage of Respondents by Age

Age Range	Number (person)	Percentage
25 - 30 years old	125	28.20
31 – 35 years old	124	40.50
Above 35 years old	151	31.30
Total	**400**	**100.00**

Table 2 shows that 124 respondents are 31 - 35 years old which accounts for 40.50%, 151 respondents are above 35 years old which accounts for 31.30%, and 125 respondents are 25-30 years old which accounts for 28.20%.

Table 3 Number and Percentage of Respondents by Educational Levels

Educational Levels	Number (person)	Percentage
Lower than middle school	62	15.50
Middle School	123	30.80
High School	70	17.40
Vocational - High Vocational Certificate	123	30.80
Bachelor Degree and above	22	5.50
Total	**400**	**100.00**

Table 3 shows that 123 of the respondents obtain middle school level which accounts for 30.80%, and 123 respondents obtain vocational – high vocational certificate which also accounts for 30.80%. 70 respondents obtain high school diplomas which accounts for 17.40%. 62 respondents obtain educational level lower than middle school which account for 15.50%. 22 respondents obtain Bachelor degree which accounts for 5.50 percent.

Table 4 Number and percentage of respondents by income per year

Annual Income	Number (person)	Percentage
100,000 – 200,000 Baht	0	0.00
300,000 – 400,000 Baht	8	2.00
500,000 – 600,000 Baht	37	9.30
700,000 – 800,000 Baht	79	19.70
900,000 – 1,000,000 Baht	133	33.30
Above 1,000,000 Baht	143	35.70
Total	**400**	**100.00**

Table 4 shows that the majority or 143 of the respondents have annual income more than 1,000,000 Baht which accounts for 35.70 %, 133 of the respondents have annual income between 900,000 - 1,000,000 Baht which accounts for 33.30%, percent, 79 of the respondents have annual income between 700,000 - 800,000 Baht which accounts for 19.70%, 37 of the respondents have annual income between 500,000 - 600,000 Baht which accounts for 9.30%. 8 of the respondents have annual income between 300,000 - 400,000 Baht which accounts for 2.00%. None of the respondents have annual income between 100,000 - 200,000 Baht which accounts for 0.00%.

Table 5 Number and percentage of respondents classified by characteristics of durian plantation area

Characteristics of Durian Plantation Areas	Number (person)	Percentage
Lowland	141	35.50
Escarpment	168	42.00
Mountain Slope	91	22.50
Total	**400**	**100.00**

Table 5 shows that 168 respondents' durian plantation areas are escarpment which accounts for 42.00%. 141 respondents' durian plantation areas are lowland which accounts for 35.50%, and 91 respondents' durian plantation areas are mountain slopes which accounts for 22.50%.

Table 6 Number and percentage of respondents classified by durian varieties

Durian Varieties	Number (person)	Percentage
Kan Yao	76	19.00
Monthong	111	27.70
Chanee	74	18.50
Kradum	49	12.30
Puang Manee	90	22.50
Total	**400**	**100.00**

Table 6 shows that 111 respondents plant Monthong varieties which accounts for 27.70%, 90 respondents plant Puang Manee varieties which accounts for 22.50%, 76 respondents plant Ka Yao varieties which accounts for 19.00%, 74 respondents plant Chanee varieties which accounts for 18.50% and 49 respondents plant Kradum varieties which accounts for 12.30%.

Table 7 Number and percentage of respondents classified by changes in sales in 2019 compared to 2018

Changes in Sales in 2019 Compared to 2018	Number (person)	Percentage
Increase	179	44.70
Decrease	221	55.30
Total	**400**	**100.00**

Table 7 shows that 179 of the respondents have increase in sales volume in 2019 compared to 2018 which accounts for 44.70%, and 221 of the respondents have decrease creasing in sales volume in 2019 compared to 2018 which accounts for 55.30%.

Table 8 Number and percentage of respondents classified by changes in profits in 2019 compared to 2018

Changes in Profits in 2019 compared to 2018	Number (person)	Percentage
Increase	145	36.30
Decrease	255	63.70
Total	**400**	**100.00**

Table 8 shows that 145 respondents have increase in profits in the year 2019 compared with the year 2018 which accounts for 36.30% percent and 255 respondents have decrease in in profits in the year 2019 compared with the year 2018 which accounts for 63.70%

Table 9 Number and percentage of respondents classified by changes in costs in 2019 compared to 2018

Changes in Costs in 2019 compared to 2018	Number (person)	Percentage
Increase	190	47.50
Decrease	210	52.50
Total	**400**	**100.00**

Table 9 shows that 190 respondents have increase in cost in the year 2019 compared with the year 2018 which accounts for 47.50 percent, 210 respondents have decrease in cost in the year 2019 compared with the year 2018 which accounts for 52.50%.

Table 10 Number and percentage of respondents classified by changes in productivity in 2019 compared to 2018

Changes in Productivity in 2019 compared to 2018	Number (person)	Percentage
Increase	140	35.00
Decrease	260	65.00
Total	**400**	**100.00**

Table 10 shows that 140 respondents have increase in productivity in the year 2019 compared to the year 2018 which accounts for 35.00%, and 260 respondents have decrease in productivity in the year 2019 compared to the year 2018 which accounts for 65.00%.

Table 11 Average and standard deviation of durian plantation areas

The amount of durian plantation area of Chantaburi Province	Average	S.D.
The amount of durian plantation area	53.16	26.754
Total	**53.16**	**26.754**

Table 11 shows that most of the respondents have 53.16 rai as an average durian plantation area. (Average= 53.16, S.D. = 26.754)

Table 12 Average and standard deviation of the number of workers in durian plantation areas

Number of workers in durian plantation areas	Average	S.D.
number of workers in durian plantation areas	12.31	5.4294
Total	12.31	5.4294

Table 12 shows that most of the respondents have approximately 13 workers in their durian plantation area. (Average = 12.31, S.D. = 5.429)

Table 13 Test results of the competitive advantage test of Thai durian market in Chantaburi province, classified by educational level by using (One-way ANOVA) test

Sources of Variations	Sum of Squares	df	Mean Square	F	Sig.
Between groups	4.752	4	1.188	3.917	.004
Within a group	119.794	395	0.303		
Total	124.546	399			

* Statistical significance is at the .05 level.

Table 13 shows the test results of differences in the competitive advantage of Thai Durian market in Chantaburi province classified by education. The Sig. value is at 0.004, which is less than 0.05 (equal to Sig). It means that different education levels lead to different competitive advantage of the Thai durian market in Chantaburi, which is statistically significant at the 0.05 level.

Table 14 Test results of the competitive advantage of Thai Durian market, Chantaburi province, classified by annual income using (One-way ANOVA) test

Sources of Variations	Sum of Squares	df	Mean Square	F	Sig.
Between groups	12.303	4	3.076	10.824	0.000*
Within a group	112.243	395	0.284		
Total	124.546	399			

* Statistical significance is at the .05 level.

Table 14 shows the test results of differences in the competitive advantage of Thai Durian market in Chantaburi province classified by annual income. The Sig. Value is at 0.000, which is less than 0.05 (equal to Sig). It means that different annual income leads to different competitive advantage of the Thai durian market in Chantaburi, which is statistically significant at the 0.05 level.

Table 15 Test results of the competitive advantage test of Thai Durian Market, Chantaburi Province, classified by durian plantation areas by using (One-way ANOVA) test

Sources of Variations	Sum of Squares	df	Mean Square	F	Sig.
Between groups	2.997	2	1.498	4.894	0.008*
Within a group	121.549	397	0.306		
Total	124.546	399			

* Statistical significance is at the .05 level.

Table 15 shows the test results of differences in the competitive advantage of Thai Durian market in Chantaburi province classified by durian plantation areas. The Sig. Value is at 0.008, which is less than 0.05 (equal to Sig). It means that different durian plantation areas lead to different competitive advantage of the Thai durian market in Chantaburi, which is statistically significant at the 0.05 level.

Table 16 Test results of different competitive advantages of Thai Durian market in Chantaburi province, classified by different durian varieties using (One-way ANOVA) test.

Sources of Variations	Sum of Squares	df	Mean Square	F	Sig.
Between groups	9.476	4	2.369	8.132	0.000*
Within a group	115.070	395	291		
Total	124.546	399			

* Statistical significance is at the .05 level.

Table 16 shows the test results of differences in the competitive advantage of Thai Durian market in Chantaburi province classified by durian varieties. The Sig. Value is at 0.000, which is less than 0.05 (equal to Sig). It means that different durian varieties lead to different competitive advantage of the Thai durian market in Chantaburi, which is statistically significant at the 0.05 level.

Multiple regression analysis results (relationship of multiple variables) techniques for analyzing

Table 17 Relationship of the competitive advantage variables of the Thai durian market in Chantaburi Province

Variables		X_1	X_2	X_3	X_4	X_5	X_6	Y
Product	X_1	1.00						
Price	X_2	0.19	1.00					
Distribution Channel	X_3	0.34	0.36	1.00				
Marketing Promotion	X_4	0.11	0.88	0.34	1.00			
Durian Plantation Area	X_5	-0.11	-0.20	-0.26	-0.28	1.00		
Worker	X_6	-0.19	-0.16	-0.08	-0.14	0.58	1.00	
Competitive advantage of Thai durian market in Chantaburi Province	**Y**	**-0.20**	**-0.63**	**0.03**	**-0.14**	**-0.09**	**0.11**	**1.00**

Table 17 shows the internal correlation coefficient between forecasting variables. The value is between -0.28 to 0.88, which is statistically significant at the 0.05 level. The predictive variables with the highest correlation coefficient are price (X2) and marketing promotion (X4) which are 0.88 in a positive direction. The predictive variables with the lowest correlation coefficient are marketing promotion (X4) and durian plantation areas (X5) which are 0.28 in a negative direction.

When considering the correlation coefficient between forecasting variables and the competitive advantage of Thai durian market in Chantaburi province, it is found that the predictive variables have a positive relationship with the competitive advantage of Thai durian market in Chantaburi province. The relationships can be sorted in descending order which are workers (X6), and the distribution channel (X3). The predictive variables that have a negative relationship with the competitive advantage of the Thai durian market in Chantaburi province can be sorted in descending order which are durian plantation area (X5), Marketing promotion (X4), Product (X1) and Price (X2).

Table 18 Importance of individual predictive variable affecting competitive advantage of Thai Durian market in Chantaburi province

Forecasting variables		B	Beta	SE_b	t	Sig
Price	X_1	-0.015	-0.019	0.040	-0.38	0.704
Product	X_2	0.406	0.412	0.104	3.902	0.000*
Distribution Channel	X_3	0.002	0.002	0.050	0.013	0.975
Marketing Promotion	X_4	-0.327	-0.559	0.061	-5.336	0.000*
Durian Plantation Area	X_5	-0.007	-0.348	0.001	-5.523	0.000*
Worker	X_6	0.031	0.299	0.006	4.985	0.000*
a = 3.363	**R = .347**		**R^2 = .120**	**$S.E_{est}$ = .528**		**F = 8.969**

* Statistical significance is at the .05 level.

Table 18 shows multiple coefficient correlation (R) which is 0.347 in value with a predictive power of 12.00% ($R^{2)}$= 0.120). The standard deviation of the forecast is 0.528. The best predictive variables affecting the competitive advantage of the Thai durian market in Chantaburi Province with statistical significance at the level of 0.05 consist of 4 variables which are price (X_2), worker (X_6) which give a positive effect, while the durian plantation area (X_5) in marketing promotion (X_4) give a negative effect. Variables that do not affect the competitive advantage are product (X_1) and distribution channel (X_3). All of the six predictive variables can be created as predictive equation in the form of raw score as follows:

$$\hat{y} = 3.363 - 0.015(X_1) + 0.406(X_2) + 0.002(X_3) - 0.327(X_4) - 0.007(X_5) + 0.031(X_6)$$

or $\hat{y}$ = 3.363 − 0.015(*product*) + 0.406(*price*) + 0.002(*distribution channel*) − 0.327(*marketing promotion*) − 0.007(*durian plantation area*) + 0.031(*worker*)

or standard score equation as follows:

$$\hat{Z} = -0.019(product) + 0.412(price) + 0.002(distribution\ channel) - 0.559(marketing\ promotion) - 0.348(durian\ plantation\ area) + 0.299(workers)$$

Discussion

The results of the mix marketing study on creating a competitive advantage of the Thai durian market in Chantaburi province shows that the number of workers affects the competitive advantage of the Thai durian market in Chantaburi province, which is not consistent with Pongsawitthorn's study (2016) on SMEs entrepreneurs and found that type of business, number of workers, and duration of

doing business did not affect the competitive advantage of the Thai durian market in Chantaburi province and the operational success.

The results of the study of mix marketing factors on creating a competitive advantage of the Thai durian market in Chantaburi province found that the marketing mix has a relationship with the competitive advantage depending on the marketing mixes of the Thai Durian market in Chantaburi province which are the amount of durian plantation area and the number of workers, which is consistent with Panyaruang, (2013) who studied the competitive advantage strategy on the success of the operation based on Balance Scorecard concept of food processing SMEs in Suphan Buri province. He found that marketing mix is related to the competitive advantage, and the process of developing new product and increasing products are related to creating competitive advantage in making differentiation.

The results of the competitive advantage of the Thai durian market in Chantaburi Province found that quick response is of the most important in terms of applying modern technology to the plantation area which is consistent with Kaewchamnong, (2012) who found that organizations that respond to customer quickly can satisfy customers, and create a greater competitive advantage. The quick response creates agility in terms of new product offerings, product update, or the decisions of the executives.

Suggestions for utilizing research results in practice

1. Product strategy

From the study, it was found that the samples give a high level of importance. Durian farmers should increase durian varieties and product quality.

2. Price strategy

The price should be suitably set and there should be more distribution channels to reduce the risk from the bargaining power of the durian middlemen.

Suggestions for further research

1. There should be a study on guidelines to create a competitive advantage of other types of businesses in Chantaburi and other provinces. Research results may differ, depending on the type of businesses or areas.

2. The connection and the gap of durian prices throughout the supply chain, which consists of 1) the selling price at the destination market, 2) the price between the operators, and 3) the price that the operators Buy from durian farmers, should be further studied.

References

Anthachai, S. (2015). *Concepts and theories of Marketing mix strategy*. Bangkok.

http://thesis.swu.ac.th/swuhesis/Man/Titapa.pdf. Retrieve on 5 May 2019.

Benjapruek, S. (2019). *Thai durian with challenges that should not be overlooked Bank of Thailand*.
From https://www.bot.or.th/Thai/MonetaryPolicy/Southern/Reasearch
Paper/Challenging_of_Durian.PDF

Detphuang, N. (2018). *The relationship between internal and external factors affecting durian exports
to the People's Republic of China*. https://www.tci-thaijo.org/index.
php/EAUHJSocSci/article/view/16451. Retrieved on 5 May 2019.

Kaewchamnong, A. (2012). *Organization with quick responses to customer needs*
http://digital_collect.lib.buu.ac.th/dcms/files/56710243.pdf. Retrieve on 5 May 2019.

Naweekarn, S. (2016). *Competitive advantage. www.mcutak.com*. Retrieve on 5 May 2019.

Office of Agricultural Economics. (2015). *Agricultural Economic Information*. Retrieve on 5 May
2019. From http://oae.go.th/
/ewtadmin/ewt/oae_web/download/download_journal/2559/commodity58.pdf.

Panyaruang, K. (2016). *Strategies of competitive advantage towards the success of operations based
on the concept. Suphanburi Province*. http://ithesis-is.su.ac.th/ddsfpace/bitstream/01-%.pdf.
Retrieved on 5 May 2019.

Panyasai, W. (2017). *Development of needs of Long-Lublae durian business lesson for agricultural
entrepreneurs in Uttaradit Province*. Retrieved on 5 May 2019. From https://www.tci –
thaijo.org/indedx.php/uruj/article/view/99254.

Porter, M. E. (1985). *Competitive Advantage Creating and Sustaining Superior Performance*. New
York: The Free Press.

Serirat, S. (2016). *Marketing Promotion*. Retrieve on 5 May 2019. From
http://marknghai.blogspot.com/2010/blog-post.html..

Wheelen and Hunger. 2016. *Marketing mix*. Retrieved on 5 May 2019. From
http://www.chulapedia.ac.th/index.php?title.