
ANALYSIS OF SUSTAINED COMPETITIVE ADVANTAGE OF PALM COOKING OIL COMPANY IN INDONESIA USING RESOURCE-BASED VIEW APPROACH (CASE STUDY AT PT. XYZ)**Arfiyunanto², Arief Daryanto³, Harianto³**^{1, 2, 3}School of Business, Bogor Agricultural University, Indonesia

ABSTRACT: *Indonesia is the biggest crude palm oil (CPO) exporter in the world. CPO export gave Indonesia the highest foreign exchange compare to the other sector. The current competition level of pam cooking oil in Indonesia added by the limitation of opening new field urge companies to survive by searching for the source of competitive advantage. The aims of this study are to identify company resources and capabilities and analyse them to obtain the source of sustained competitive advantage for the company. This study uses literature review, in-depth interview and questionnaires to gather the opinion of experts. Data analysis using descriptive qualitative method using Value Chain Analysis (VCA) and Valuable, Rareness, Inimitability, Organization (VRIO) framework as tools. The results showed that there are 16 resources and 15 capabilities identified using VCA. One resource pass the VRIO analysis and become the source of sustained competitive advantage for the company. Four resources and capabilities pass the V, R and O variable and gave temporary competitive advantage to the company. Two capabilities do not fulfil the O variable and gave the company competitive disadvantage. Strategy developed combine several resources and capabilities to produce new resource and capability which are unique and inimitable.*

KEYWORDS: *competitive advantage, palm cooking oil, RBV, VCA, VRIO.*

INTRODUCTION

Indonesia currently is the biggest palm oil exportir in the world reaching 38,5 million Tons per year (<https://www.indexmundi.com/agriculture/?commodity=palm-oil>). The data in accordance with the data from Dirjen Perkebunan book titled Statistik Perkebunan Indonesia Komoditas Kelapa Sawit 2015-2017. Based on the estimation of palm oil estate development in 2017 reaching 12 million acre, Indonesia will be able to produce more than 35 million Tons palm oil in 2017. High demand of palm oil cannot be absorbed entirely by local consumer. The majority of palm oil produced are being exported to fulfil global demand.

From all the palm oil exported, some in the raw state and the other in the refined state. One of the product being export is palm cooking oil/ olein. Figure 1 shows the trend line of palm oil produced and exported, and refined palm oil exported. Refined oil export steadily increased while crude palm oil export is decreasing. This indicate that there is a trend of refining crude palm oil in Indonesia before exporting the final product.

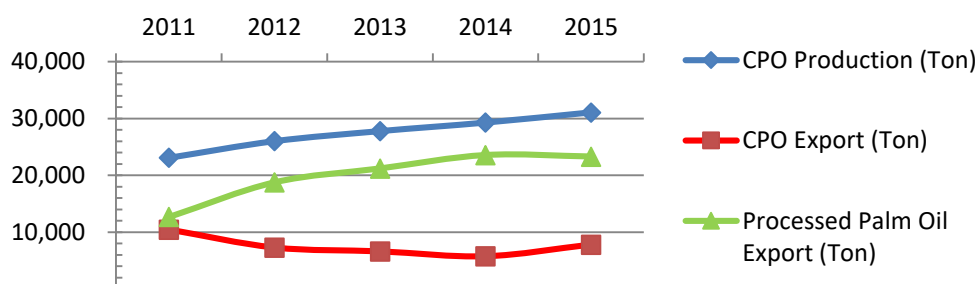


Figure 1. Production and export of CPO and its derivatives.

One of the indicator of business competition is market share. Marketing magazine and Frontier Consulting Group through www.topbrand-award.com website conducting a survey towards selected few of palm cooking oil brands and published the results. Parameters used are: top of mind share, top of market share, and top of commitment share. Top Brand Index of palm cooking oil from 2012-2018 displayed in Figure 2. The result shows that palm cooking oil market share majority of more than 80% covered by five brands from five companies. One of them shows significantly high score above the other four. The difference of competitive advantage between companies within the same industry, facing the same threat and opportunity, the same buyers, shows the difference of internal attribute from each company. Barney (1995) called this internal attributes as resources and capabilities.

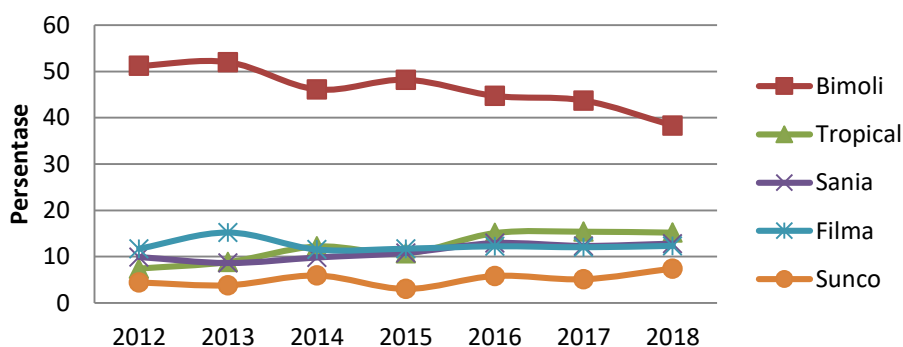


Figure 2 Palm Oil Top Brand Index 2012-2018.

Based on Porter's (1980) competitive theory, there are five forces determining the competitiveness of business, which are: supplier bargaining, buyer bargaining, threat of new player, competition from company in the same industry, and threat of new substitute product. The capacity upgrade of palm cooking oil plant will increase business competition. Capacity upgrade can be gained by the new player entering the industry or by existing player upgrading their plant. Capacity. Business competition eventually and naturally will chose its winner and kick its loser from palm oil industry.

LITERATURE REVIEW

Palm Cooking Oil

Palm cooking oil is a result of refining crude palm oil. Muhammad (2015) explain that crude palm oil contains contaminants and need to be refined in several conventional process: degumming, de-acidification, bleaching, and deodorization. The next process if fractionation which is the separation of

solid fraction (stearin) and liquid fraction (olein). Olein what the market usually called palm cooking oil.

Competitive strategy

Merriam-Webster web define strategy as the art to design or applied such a plan or scheme developed to reach a certain goal. In business world, business strategy only have one goal, that is to produce cash in bigger than cash out (Litman & Frigo, 2004). Company need competitive strategy to win business competition with the end result giving financial advantage to the company. Competitive strategy is a way for a company to reach its goal, which is win the business competition (Porter, 1980). Porter (page 4, Competitive Strategy, 1980) explain on how to develop a competitive strategy, bay analyzing five forces of competition consisting of: new comers, substitute product, buyers, suppliers, and competition from company in the same industry. Porter propose three generik strategy to compete with the other company: 1. Price superior; 2. Differentiation; 3. Focus.

Resource-Based View (RBV)

Wernerfelt (1984) is one of the first to propose using RBV as alternate analysis from product side for developing company's competitive strategy. Company's resources are all tangible and intangible assets owned by the company. Such as: brand name, technological knowledge, usage of skilled worker, valuable contacts, machineries, efficiency procedure, capital, etc.

Value Chain Analysis

In 1985, Proter introduce the term Value Chain in his book as a tool to systematically analyze all activities within the company and how they interact to one another. The purpose of VCA is to understand the behavior of cost and differentiation source, existing and potential.

VRIO Framework

In 1995, Barney enhanced his VRIN framework proposed earlier in 1991 with some changes. Barney merge Non-substitutability into Imperfectly Imitable by explaining that imitation can be achieved using duplication and substitution. Barney also add the importance of organization capability to manage resources and maximize its potential. Organization capability change the VRIN into VRIO framework. The connection between VRIO frameworks with company competitiveness showed in Table 1.

Tabel 1. VRIO attribute and Competitive Advantage

| Attributes (resources) | | | Process (capabilities) Managed by Organization | Implication to the competition |
|------------------------|------|--------------------------------------|--|---------------------------------|
| Valuable | Rare | Inimitable/ non- substitutable | | |
| No | - | - | No/Yes | Competitive Disadvantage |
| Yes | No | - | ↕ | Competitive Parity |
| Yes | Yes | No | ↕ | Temporary Competitive Advantage |
| Yes | Yes | Yes | Yes | Sustained Competitive Advantage |

Source: Barney dan Hesterley (2015, pg. 103)

RESEARCH METHOD

Research Approach

This study approach is using descriptive qualitative method with case study. The use of case study was chosen because RBV approach meant to find one or a set of resources and capabilities uniquely embedded in a company.

Research Data

The type of data used in this study is primary and secondary data. Primary data obtained by doing in-depth interview using semi-structured questionnaire towards the respondents. Observation of the operational activity within the company was done directly on site. Secondary data obtained from company's annual report publicly available on company website, statistical data from Central Statistics Agency (BPS) and related literature.

The primary data used include:

1. Description of the whole operational activity on each department in the company by interview.
2. Resources and capabilities identified by interviewing all department head and general manager.

The secondary data include:

1. List of equipment on each department.
2. Incoming ships and cargo quantity for the period of 2015-2017 from operation department.
3. Material processed and product produces for the period of 2015-2017 from production department.
4. Quantity of palm oil imported per country from operation department.
5. Production cost efficiency for the period of 2015-2017 from production department.
6. Plant utilization Production cost efficiency for the period of 2015-2017 from process engineer department.
7. Complaints handling for the period of 2015-2017 from quality management department.
8. Annual financial report for the period of 2013-2017 from company website.
9. Maintenance performance data for the period of 2015-2017 from engineering department.
10. Machines and equipment performance data for the period of 2015-2017 from engineering department.
11. Company's certification from quality management department.
12. Training plan-realization for the period of 2015-2017 from human resource department.

Respondent's selection technique

Respondents selected using purposive sampling method by purposely select respondent based on their knowledge and competency on the matter to discuss. Respondent is all party related with the operation and management of the company consisting of managers and general managers. List of respondents can be seen on Table 2.

Table 2. List of respondent

| No | Respondent |
|----|--------------------------------|
| 1 | Production manager |
| 2 | Logistic manager |
| 3 | Human resource manager |
| 4 | Engineering manager |
| 5 | Research & Development manager |
| 6 | Safety and Environment manager |
| 7 | Quality Management manager |
| 8 | General manager |

Data analysis

Data analysis was done on each stage of this study using analysis tools to obtain desired result which will be analyzed on the next stage thoroughly. Stages of this study with data analysis tool used can be seen in Table 3.

Table 3. Data analysis

| Stages | Tools | Result |
|--|----------------|---|
| Resources identification sumber daya | VCA | Resource as potential source of competitive advantage |
| Capabilities identification | VCA | Capabilities as potential source of competitive advantage |
| Identify source of sustained competitive advantage | VRIO framework | Source of competitive advantage |
| Formulation of competitive advantage strategy | Descriptive | Strategy alternative to gain competitive advantage |

RESEARCH RESULT

Identification of Resources and Capabilities

VCA

VCA is a way to see the whole activity of a company from the perspective of each section. Porter (1994) divided company's activities into nine section and mainly separate those nine as primary activities and supporting activities. Using VCA has helped this study to determine the resources and capabilities of each stages in the company. There are several area unable to be observed due to being outsourced by the company. Those area are: procurement, marketing and sales, and services. Figure 1 displayed the results of value chain analysis in the company.

| | | | | | | | |
|-----------------------|---------------------------|--|---|---|--|--|--------|
| Supporting activities | Firm infrastructure | - 15 acre company land inside industrial estate - High value company assets - Nearest location with port | - Company's finance management - Law regulation compliance - Quality management | - Port facility with 8,5m draft and 10.000 MT max. DWT - Tank capacity 123.920 MT | - Environment and safety management - Total plants capacity 1800 Tons/day | Margin | |
| | Human resource management | - Training - Recruitment | - Recruitment - Training - <i>Outsourcing</i> | - Recruitment - Training - <i>Partial Outsourcing</i> | - | | |
| | Technology | - Temperature sensor on all tank | - <i>Robotic arm</i> - <i>Check weigher</i> | - Advanced ASRS warehouse | - | | |
| | Procurement | Outsourced to PT. ABCD: <i>Performance based</i> | | | - | | |
| Primary Activities | Inbound logistic | - Raw material receiving - Raw material storage - Raw material deliveries to processing plants | - Production process - Product packaging | - Product data entry to SAP system - Product data entry to ASRS system - Product storage in ASRS warehouse - Product retrieval from ASRE warehouse | - <i>Outsourced to PT. ABC: performance base output</i> | - <i>Outsourced to PT. ABC: performance base output</i> - Complaint management using Customer Feedback Management | Margin |
| | Outbound logistic | Operation | Marketing & sales | Service | | | |

Figure 1. Value Chain Analysis of the company

VCA was done to all observable activities within the company. Few functions was outsourced by the company to other company such as: marketing and sales, services and procurement. Outsourced functions was not analyse using VCA since it will not goes aligned with the RBV approach, that is seeking advantages from the company's own resources. Outsourcing is the procurement of value adding activity from external provider (Hoskinson, Hitt, Ireland and Harrison, 2008).

Source of Sustained Competitive Advantage

VRIO

VRIO framework proposed by Barney (1995) as the development from VRIN framework earlier proposed at 1990. VRIO framework consider O variable to determine wether the organization ready and capable to manage the resources and capabilities owned to gain competitive advantage. Resources and capabilities identified and tested will give varied results related to the competitiveness as described by Barney and Hesterley (2015).

VCA application to each of observable stages within the company resulting resources and capabilities. VRIO analysis to the resources and capabilities was done as an effort to seek the source of sustained competitive advantage. The result of VRIO analysis to the resource was shown in Table 3 and th result of VRIO analysis to the capabilities was shown in Table 4.

There are 16 resources and 15 capabilities identified within the company using VCA. One resource pass all VRIO test and became the source of sustained competitive advantage. There are four resources and capabilities pass the V, R and O test and gave the company a temporary competitive advantage. There are two capabilities did not pass the Organization test and causing the company a competitive disadvantage. Strategy developed was to merge several resources and capabilities to create new set of resources and capabilities so unique and inimitable.

Table 3. VRIO analysis of resources

| No. | Resources | V | R | I | O |
|-----|---|---|---|---|---|
| 1 | Crude palm oil raw material incoming facilities | √ | | | √ |
| 2 | Crude palm oil raw material storage capacities | √ | | | √ |
| 3 | High quality palm cooking oil product | √ | | | √ |
| 4 | Palm cooking oil plant with big capacity | √ | | | √ |
| 5 | Palm cooking oil plant with high technology | √ | | | √ |
| 6 | Advanced ASRS warehouse | √ | √ | | √ |
| 7 | CFM system provided to manage complaint | √ | | | √ |
| 8 | Loan capacity | √ | | | √ |
| 9 | Capital and assets | √ | | | √ |
| 10 | Strategic plant location | √ | √ | √ | √ |
| 11 | Plant and facilities | √ | | | √ |
| 12 | Healthy and comfortable working environment | √ | | | √ |
| 13 | High skilled employee | √ | √ | | √ |
| 14 | Employee's loyalty | √ | | | √ |
| 15 | System to accommodate idea from employee | √ | | | √ |
| 16 | Advanced technology in production | √ | | | √ |

Table 4. VRIO analysis of capabilities

| No. | Capabilities | V | R | I | O |
|-----|--|---|---|---|---|
| 1 | Speedy receiving and delivering crude palm oil raw | √ | | | √ |
| 2 | Crude palm oil raw material storage | √ | | | √ |
| 3 | Producing high quality product | √ | | | √ |
| 4 | Overcome latest issue | √ | √ | | √ |
| 5 | Run the production process efficiently | √ | | | √ |
| 6 | Maintaining quality and quantity during storage | √ | | | √ |
| 7 | Speedy product retrieval from ASRS warehouse | √ | | | √ |
| 8 | Speedy customer complaint handling | √ | | | √ |
| 9 | Maintaining machine and equipment | √ | | | √ |
| 10 | Acquire loan | √ | | | √ |
| 11 | Achieve RSPO supply chain certification | √ | √ | | √ |
| 12 | Controlling product quality | √ | | | √ |
| 13 | Controlling work risk and environmental impact | √ | | | √ |
| 14 | Recruiting employee | √ | | | √ |
| 15 | Improving employee competency | √ | | | √ |

Based on the interview with company's management, observation and data analysis, the formula of competitive strategy alternative provided in Table 5. Strategy policy, implementation program and measurement provided in Table 6.

Managerial Implication

To achieve sustained competitive advantage using resources and capabilities owned, the company can do two things. First, company can maximize the exploitation of resource and capability passed the VRIO

framework analysis. Second, company can utilize resource and capabilities partially passed the VRIO framework analysis. The latter can be achieved by combining several resource and capability to develop a new, unique and difficult to imitate resource and capability as such it will pass the VRIO analysis.

CONCLUSION

The company has outsourced some activities considered not part of the core competency of a palm cooking oil manufacturing company. There are 16 resources owned by the company within observed activities. There are 15 capabilities owned by the company within observed activities. VRIO framework used to analyse resources and capabilities as potential source of sustained competitive advantage. There are two activities giving competitive disadvantage and resulting below-average returns, which are:

| No. | Resource and Capabilities | Strategy Alternative |
|-----|---|-------------------------------------|
| 1 | Strategic plant location Overcome latest issue Palm cooking oil plant with big capacity High quality palm cooking oil product Palm cooking oil plant with high technology | Technology enhancement strategy |
| 2 | Advanced ASRS warehouse Maintaining product quality and quantity Speedy product retrieval from ASRS warehouse | Service excellence strategy |
| 3 | High skilled employee Healthy and comfortable working environment Employee's loyalty Improving employee competency | Human resource development strategy |
| 4 | Achieve RSPO supply chain certification Controlling product quality Controlling work risk and environmental impact | Certification fulfilment strategy |

Table 5. Competitive strategy alternative

Speedy receiving and delivering crude palm oil raw material and Speedy customer complaint handling. Both of them are currently not well organized by the company. There are four activities giving temporary disadvantage and resulting above-average to average returns, which are: Overcome latest issue, Advanced ASRS warehouse, Achieve RSPO supply chain certification and High skilled employee. These four pass the Valuable, Rareness and Organization criteria but not Inimitable. There is one activity pass all VRIO framework analysis and giving the company a sustained competitive advantage and resulting above-average return, which is a strategic plant location.

There are four strategy developed and can be implemented by the company: 1. Technology enhancement strategy; 2. Service excellence strategy; Human resource development strategy; and 4. Certification fulfilment strategy.

Future study

This study was conducted in one of the plant owned by the company. This study aims to search a source of sustained competitive advantage within the company. Due to some limitation at site level, data collected was varied from site level and corporate level. The difference of data level may affect the result achieved. Advisable in future study to use data on the same level so that the identification of resource and capabilities will represent the company more closely.

| No | Resources and Capabilities | Strategy | Strategy Policy | Implementation Program | Measurement |
|----|---|---------------------------------|---|---|---|
| 1 | <ul style="list-style-type: none"> - Strategic plant location - Overcome latest issue - Palm cooking oil plant with big capacity - High quality palm cooking oil product - Palm cooking oil plant with high technology | Technology enhancement strategy | <ul style="list-style-type: none"> - Improving relationship with estate management - Technology implementation to overcome latest issue | <ul style="list-style-type: none"> - Develop and deliver activity report to estate management - Develop communication network with tenants and estate management - Install new equipment to produce product which fulfil new requirement efficiently - Upgrade plant capacity - Develop plan to control new product specification - Develop automation plan | <ul style="list-style-type: none"> - Relation quality index - Involvement intensity - Machine availability rate - Increase product quantity and percentage of plant utilization - Product quality pass new specification requirement - Percentage of plant automation |
| 2 | <ul style="list-style-type: none"> - Advanced ASRS warehouse - Maintaining product quality and quantity | Service excellence strategy | <ul style="list-style-type: none"> - Improve product stock data accuracy - Improve product retrieval time | <ul style="list-style-type: none"> - Develop prosedure to input data and minimize entry mistake - Mechanization of loading activity | <ul style="list-style-type: none"> - Percentage of data difference between system and actual - Loading time since truck |

| | | | | | |
|---|---|-------------------------------------|--|--|--|
| | - Speedy product retrieval from ASRS warehouse | | | | stand by until depart |
| 3 | <ul style="list-style-type: none"> - High skilled employee - Healthy and comfortable working environment - Employee's loyalty - Improving employee competency | Human resource development strategy | <ul style="list-style-type: none"> - Improve and maintain employee's skill - Create positive working environment - Improving payment standard - Develop structured and focused training system | <ul style="list-style-type: none"> - Refresh and new training for special skill - Indoor planting in all room - Provide recreation room for employee - Update salary range by calculate employee's experience and skill set - Develop annual Calendar of Training | <ul style="list-style-type: none"> - Periodic evaluation of employee's skill - Numbers of un-attendance and sick days - Turnover rate below standard - Realization of annual training program |
| 4 | <ul style="list-style-type: none"> - Achieve RSPO supply chain certification - Controlling product quality - Controlling work risk and environmental impact | Certification fulfilment strategy | <ul style="list-style-type: none"> - Zero major finding during external audit - No product reject due to out specification - No major pollution or fatality | <ul style="list-style-type: none"> - Develop internal audit program by competence internal auditor - Product quality control during storage - Environmental and safety regular inspection | <ul style="list-style-type: none"> - Percentage of internal audit commenced - Numbers of internal audit finding - Percentage of product in specification - Percentage of environmental and safety inspection - Percentage of closing inspection finding |

Table 6. Strategy policy, implementation program and measurement

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