3.0 METHODOLOGY AND RESEARCH ANALYSIS

This is a qualitative research based on mainly secondary data which covers Malaysia Palm oil industry, Indonesia palm oil industry and world oils and fats demand and supply mechanism.

3.1 Source of information

a) Primary Data

A face-to-face interview has been conducted with two-experience palm trader. First is Mr. Subramaniam Balakrishnan from Cargill Sdn. Bhd, currently the palm-trading manager who had been in the palm industry for 22 years. Second is Mr. Yap Soon Leong Senior Manager for Emirates Refining Company.

Objective of the interview is to gather information on the Malaysian palm oil industry evolution since 1978, the mechanism on the demand and supply of Malaysia Palm Oil, the most recent development issues related to Malaysia Palm Oil.

They also provide valuable information on the outlook of Malaysia palm industry in year 2005. The challenges faced and alternatives strategies to remain competitive.

b) Secondary Data

The historical data on Malaysia Palm Oil production, export and stocks from statistical department and also from various articles, which ultimately

rendered from the Malaysia Statistical Department and independent surveyors.

Historical data on Indonesia Palm Oil Production in Indonesia, from seminar paper were extracted from Central Bureau of Statistics Indonesia and Indonesia Palm Oil Producers Association (GAPKI).

The historical and projected figure of world Oils and fats, both animal and vegetable, are based on data published by Oil World, a private company from German specializing in world oils and fats production, export and stocks movement. Oil world issued weekly, monthly and yearly update for oilseeds, oils and meals.

The data on projection for palm production in year 2005 is solely from Chow Chee Seng paper presented at the 22nd World Congress and Exhibition of the International Society for Fat Research (ISF) in September 8-12, 1997 in Kuala Lumpur. He used a PORIM forecasting model to obtain the planting area, hence the production of palm oil. In the PORIM forecasting model, among the variables used are replanting, new planting, age distribution of mature palms and yield profiles

The data on projection for world consumption of major oils and fats in year 2005 is extracted from Oil World published in 1996.

Finally, the data on current total world demand and supply of oils and fats is also rendered from Oil World.

3.2 Data Analysis method

This study attempts to analyze the competitiveness of Malaysia palm oil industry in year 2000 and 2005. All the input obtained would be applied in each section of the five factors (forces) in Porter's model.

A table adapted from Dess G.G. & Miller A is used to assess the industry competitiveness. (Dess & Miller, 1993) It is designed to assist with the application of the Five Forces Approach. Each dimension of the five forces would be score high or low.

Next is to recommend one of three generic strategies as prescribed by Porter for achieving above the average performance.

Based on the generic business strategies recommended, analysis would be taken on the organization value chain. The aim is to strengthen those activities which most contribute to the overall strategy while constraining resources allocated and consumed by task less critical

3.3 Research Analysis

a) New Entrants

Palm oil is a commodity itself, hence, unable to differentiate the product in order to obtain customers loyalty. This also implies that the switching cost is low.

On the other hand, the existing palm plantation are mostly fully integrated i.e. from plantation to mill to refinery to packaging. The new entrant must enter integrated or a cost disadvantage. The independent firm, says a palm refinery, faces a difficult time in getting a competitive price and may be squeezed if plantation that are fully integrated offered unattractive terms on the inputs i.e. crude palm oil.

Due to this, large financial investment is required to in order to compete. According to a reliable source, a new entrant need to acquire a substantial amount of land in order to be a large player in the market. The estimated cost of a palm plantation is RM50 thousand per hectare and a reasonable 1000 hectare plantation land would come up to RM50 million.

Furthermore, most large integrated plantation already strategically located near to a port which is cost advantage compared to a new entrant to purchase plantation land from inland.

The Malaysia Palm oil Board, a child from the merging of Palm Oil Registration and Licensing Authority and Palm Oil Research Institute Malaysia, coordinates and develop policies and strategies pertaining to the oil palm industry. One of the functions is to regulate, register, coordinate and promote all activities relating to the planting, supply, sale, purchase, distribution, movement, storage, surveying, testing, inspecting, brokering, export and import of oil palm products and the milling of oil palm fruit. It also prescribes the standards or grades of oil palm and oil palm product. These steps on one hand could further enhance the viability and competitiveness of the Malaysia palm oil. But on the other hand, stringent regulation may be a barrier of entry to new players.

With regards to potential entrants expectation of retaliation, there is no history of vigorous retaliation to entrants. In a macro level, the shortfall of world supplies of oils and fats by 0.2 million ton in 1997 and further widening to 0.72 million ton in year 2000 would definitely see new entrants into the oils and fat market. This suggests that the palm industry would continue to grow. But this growth would not come from new entrant. Existing players would continue to increase their plantation acreage. The level of threat of new entrant would be Medium to High.

In year 2005, economies of scale still is as important in order to compete in the global market, but the advent of technology would make it easier to achieve a low cost producer. High cost of investment in new technology would make it less attractive for new entrant into the market. Furthermore, cost of land would be more expensive with the limited land available in Peninsular Malaysia. Therefore, level of new entrant threat would then be Medium, lesser than year 2000.

b) Substitute

Soya is the nearest substitute to palm oil. Palm had gradually gaining its share from soy since 1980, where world consumption of palm was only at 12 % and in year 2000 projected to reach 22% share. On the contrary, soy share has reduced from 33% to 25%.

Refined Bleached and Deodorized palm oil can perform the same function as a hydrogenated soy oil. The hydrogenated soy oil application is for making of margarine, shortening and as frying oil. It is known that refined bleached and deodorized palm oil nearly always sells well below

hydrogenated soya oil price but demand is more of a function of free of trans fatty acid which , trans fatty acid is adverse to health.

It is a different scenario for cooking oil application. Demand from India would swing drastically depending on the prices of palm and soy. If palm price is more attractive, the countries would import more of palm and vice versa. For example from Nov 97 to Oct 98, the percentage of palm import into India was 65%. (Mistry, 2000). It had dropped to 60% in the following period when Crude palm price was hovering at RM2000 per mt compared to RM1500 per mt level the year before.

Similar trend are expected in China if not because of the Chinese government quota on palm, which limits the importation of palm in order to protect its local soy producers. (Ahmad, 2000)

In year 2000, profitability of industry having palm oil substituted with soy is high because the increase in soy production would reduce the cost of production per unit, given the economic of scale. There for the level of threat in substitute is high.

The advent of GMO, genetically modified organic, expect to pose a threat to Malaysia palm oil. The success of this technology would enable soy to be modified to harden form for the used in margarine, shortening. This would recapture soy producers lost share to palm oil. Therefore in year 2005, the level of substitute threat expects to be higher than year 2000.

c) Rivalry Intensity

There are all together 33 mediums to large-scale refinery in Malaysia alone. There is a great likelihood that these companies performed maverick where they would undercut prices in order to obtain business.

The Malaysian palm oil industry growth is relatively slow due to the constraint of land to plant oil palm. Therefore, it turns competition into market share game, having the least cost via economic of scale, to drive competitors out from the market. To further aggravate, palm oil is a commodity and lack of differentiation, there is a low switching cost for buyers.

As the economies of scale dictates that capacity must be added in large increment, Malaysia refiners had increased their refining capacity to 12 million ton per annum versus Malaysia palm oil production of only 10.6 million ton. An over capacity situation arise with a gap 1.4 million ton.

Diverse competitors background and high strategic stakes made the rivalry in the palm industry more volatile.

The current world palm growth rate is about 6% per annum and Malaysia palm had been growing at a rate of 4% from 1995 to 2000. Level of intensity consider high.

In year 2005, world palm production expects a growth of 5% only and world supply of oils would equal demand. Hence, level of intensity would be higher than year 2000.

d) Suppliers Power

Since most palm oil producers are fully integrated from plantation to production of packaged product, their main suppliers are fertilizers for plantations, bleaching earth for refinery, food ingredients for packaged plant.

These inputs have minimal differentiation and switching cost of suppliers is relatively low. Fertilizers and bleaching earth are a generic hence, a low substitution for these products. On the contrary, food ingredients have various substitutions. For example, antioxidant in palm oil could be from BHA, BHT, TBHQ and even Tocopherol (Bailey, 1980) Depending on customers' requirements, ability of customer to pay the different prices of the antioxidants and subject to the country's food regulation, these antioxidants are substitutable.

Given the importance of palm oil industry in Malaysia, especially in contributing towards nation's economy, and being the world's second largest edible oil and fats producer, the consumption of fertilizers, bleaching earth and ingredients are huge. Even though the cost of these inputs are a fraction of the total purchase, the sheer volume of these inputs made it important for the suppliers.

At this point of time, there is no fertilizer, bleaching earth and food ingredients company which would posed a threat of forward integration . The level of threat in this facet remains low both in year 2000 and 2005.

e) Buyers Power

Buyers for Malaysia palm oil industry are consuming countries. There are two aspects of analysis i.e. the bargaining leverage and price sensitivity.

As mentioned earlier in this study, China is by far the largest importer of vegetable oils and fats, followed by EU-15 and India. Specifically for palm oil, India is the single largest importing country with 14% of the total world palm oil production while China is only at 7% for the period of 1998/99. This is due to the quota system imposed by the Chinese government capping palm oil imports at 1.4 million mt per year for 1999 and 2000.

Both these countries had refineries of their own. For example in China, the Kuok group had joint venture with local partners in Guangzhou to form the largest palm refinery in China called South Seas. These two countries are also capable using both palm and soy.

As this is a commodity the price is highly sensitive or in economic term demand is price elastic. A big portion of the price of palm oil would be a total purchase as it would be consumed as cooking oil. Brand identity has been grayed.

The level of backward integration would be high at present and would even more intense in year 2005 as consuming countries would like to benefit from full integration of palm business, besides enjoying their government incentives for such effort. Another push is from the basic logistics advantage where products would be delivered on time and while remain its freshness.

The above explanation could further be elaborated in the following table which adapted from Dess G.G. & Miller A,. It is has two columns i.e. year 2000 and year 2005

	Year 2000		Year 2005	
Threat of new entrant is high when	**High**	**Low**	**High**	**Low**
Economies of scale are	XX		X	
Product differentiation is		X		X
Capital requirement is	X		X	
Switching costs are	X		X	
Incumbent's control of distribution is		X		X
Incumbent's property knowledge is		X		X
Incumbent's access to raw material is	X		X	
Incumbent access to government subsidies is		X		X
	Medium to High		Medium	
Intensity of Competitive Rivalry is High when	**High**	**Low**	**High**	**Low**
Number of competitors is	X		XX	
Industry growth rate is	X			X
Fixed cost are	X		X	
Storage cost are	X		X	
Switching costs are	X		X	

Exit barriers are	X		X	
Strategic stakes are	X		X	
	High		High	
Threat of substitute products is high when	**High**	**Low**	**High**	**Low**
Profitability of industry producing substitute is	X		X	
Rate of improvement in price performance relationship of substitute is	X		XX	
	High		High	
Power of Buyer is high when	**High**	**Low**	**High**	**Low**
Concentration of buyers relative to suppliers is	X		X	
Volume of purchase is	X		X	
Product differentiation of suppliers is		X		X
Threat of backward integration by buyers is	X		XX	
Buyers knowledge about suppliers cost structure is	X		X	
Extent of buyers profits is		X		X
Cost savings from the supplier's product are	X		X	
Percentage of total buyer's cost spent on the supplier's input is		X		X
	Medium to High		Medium to High	

Power of Supplier is high when	High	Low	High	Low
Concentration relative to buyer industry is		X		X
Availability of substitute product is	X		X	
Importance of customer to the supplier is	X		X	
Differentiation of the suppliers product and services is		X		X
Switching cost of the buyer are		X		X
Threat of forward integration by the supplier is		X		X
	Low		Low	

Graphically, year 2005, Malaysia palm oil competitiveness could be shown as follows:

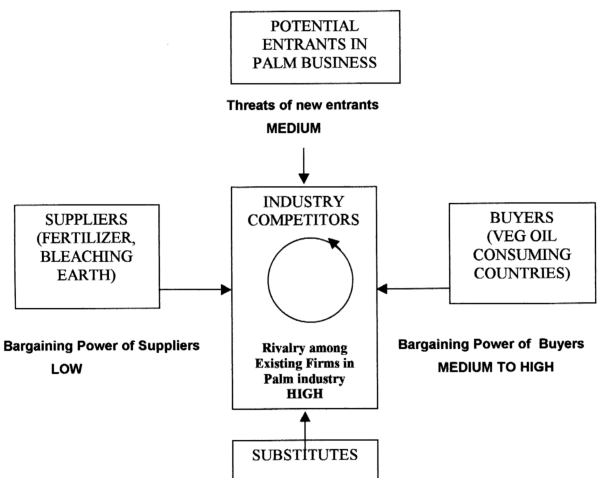

Figure 3: Adapted from Porters Five Factor Model