I. INTRODUCTION

1.1 Background Information

Agricultural products have a very important role to perform in the development of the Indonesian national economy. These commodities, and specifically crude palm oil (CPO), have contributed immensely to the Gross Domestic Product (GDP) of Indonesia, led to growth in production and areal development, created various forms of employment for more than 3.5 million people in this sub-sector, increased international and national trade and improved the living standards as well as the financial status of the local people (Siregar and Sinaga, 2006). Crude palm oil is considered a strategic commodity in the Indonesian economy being a source of raw material for the most commonly used cooking oil consumed in Indonesia. The CPO price plays an important role in determining the inflation rate of the Indonesian economy (Badan Pusat Statistik, 2001; Arifin and Susila, 1998; Amang, 1995). Palm oil is an important export commodity that provides export earnings through foreign exchange inflows and it is considered as one of the major sources of income for the Indonesian economy.

Indonesia is one of the highest CPO producers in the world. This can be attributed to the country’s favorable climatic conditions, the large area of production potential, its investment in research and technology, as well as the availability of trained manpower that have necessary skills to bring about improvements in CPO production. Such improvements have uplifted the quality of Indonesian CPO to meet the specifications of the international market for crude palm oil (Siregar and Sinaga, 2006). The development of CPO needs to focus on the prospects and other means that would make it meet the basic customer
requirements for the commodity for use in the food industry, industrial applications, and as an alternative source of energy.

The crude palm oil industry in Indonesia has evolved from government sponsorship and market interventions to a private sector initiative in response to international price signals and continuous market growth. Induced by the profitability in this sector, oil-palm plantations in Indonesia have expanded from 600,000 hectares in 1985 to more than 6 million hectares by early 2007, and are expected to reach 10 million hectares by 2010. At the same time, Indonesian palm-oil production has increased from 157,000 metric tons to 16.4 million metric tons in the same period, while exports have increased from 126,000 metric tons to 12 million metric tons (Rhett, July 2007).

From the global perspective, in 1962 world production of CPO recorded 1.2 million tons and in 2005 this reached 33.33 million tons, a staggering 28 million tons more than production in 1962. The world CPO production has grown steadily and relatively faster as compared to other oil yielding crops. During the period 2001-2005 the world CPO production grew on average 8.78 percent per year (Soeherman et al., 2006). However, CPO production in Indonesia has been constantly lower than that in Malaysia. During the period 2001-2002, Malaysia produced 11,858,000 tons of CPO compared to 9,200,000 tons in Indonesia. In 2003-2004, the production in Malaysia reached more than 13 million tons while in Indonesia was 11.6 million tons. The afore-going statistics reflect the relatively stronger position of Malaysia in the world production of CPO in the past. In 2005, Malaysia contributed 47 percent to total world CPO production, compared to

---

1 Rhett A. Butler. 2007. Is peat swamp worth more than palm oil plantations? www.mongabay.com
Indonesian with 38 percent. However, it is expected that in 2007 Indonesia will surpass the Malaysian position in CPO production. Based on *Oil World* estimation (Soeherman, et al., 2006), in 2010 Malaysia is expected to produce 17.7 million tons of CPO, while the level of production in Indonesia will reach about 22.5 million tons. Other important CPO producers in the world include Thailand, Nigeria, Columbia, Venezuela, and Cote d’Ivoire. However, total CPO production from these competitors has always been much smaller than that from Indonesia and Malaysia.

In 2005, Indonesia and Malaysia together produced 85 percent of global CPO supply that accounted for about 23 percent of the demand for vegetable oils in the world. On the other hand, between 1999 and 2005 the other origin countries produced, on average, less than one million tons. Even, in the last five years, while the CPO production in Indonesia and Malaysia has kept growing annually, the production in the other competing countries have more or less stagnated.

Export growth can be attributed to three factors: world demand factor, product and market effects and competitiveness effects. The world demand factor reflects growth in exports that can be attributed to rising international demand, i.e. the stronger global import demand, the stronger the country’s export growth (Susila, 2004). However, an increase in a country’s share of world trade can only be explained by factors beyond world demand effects. Major importers of Indonesian CPO include India, the Netherlands, China, Pakistan, Bangladesh and United Kingdom. As the production increases, the volume of export increases while local demand remains relatively stable. The export of palm oil consists of Crude Palm Oil and Processed Products, which comprise of Refined, Bleached
and Deodorized Palm Oil (RBD PO), RBD Palm Olein, RBD Stearin and Crude Olein.

The export potential of Indonesian CPO does not depend only on the excess supply of this commodity in the domestic market, but also on the world market opportunity and capability of Indonesian CPO industry to make good use of this opportunity. Tambunan reported that Indonesian export of CPO increased from 117,300 Mt or US$ 21.39 million in 1961 to 6,386,410 Mt or US$ 2,454 million in 2003. The foreign currency contribution of CPO increases year by year. In 2004, the country’s total non-oil and gas export revenues recorded at US$54 billion, of which US$ 4.43 million (8 percent) came from CPO export (Tambunan, 2006).

There are fundamental economic drivers that tend to result in countries specializing in the production and export of products for which they have a comparative advantage. Provided that technology can be directly acquired and located with relative ease, comparative advantage between countries and regions typically results from differences in the relative supply of inputs, such as labor or natural endowments. Industries that rely on a relative abundance of factors of production in a particular country or region are generally considered to have a comparative advantage in the products they produce. By engaging in trade, countries that specialize in producing goods at which they are relatively efficient will maximize their economic wellbeing by importing the goods that they are relatively less efficient at producing (Short et al., 2006).

Considering the importance of CPO, Indonesia has launched policies to optimize the development of the industry, such as supply stabilization. The most important policies have been on export tax, first implemented in August 1994 to
stabilize and secure the domestic supply and price. The export tax rate when first introduced was linearly related to the CPO price, ranging from 40-60 percent of the difference between the CPO price and minimum export price to be taxed. From July 1997 to February 1998, the rate was changed to 5 percent of the CPO price. Due to a sharp increase in the CPO price and substantial depreciation of the rupiah, the government banned export in the beginning of 1998. Then, this policy was replaced by an export tax of 60 percent which has since been gradually reduced to 30 percent in July 1999 and approximately 3 percent in 2002 (Susila, 2004).

The export tax policy was expected to have a substantial impact on various aspects of the industry, such as investment (area), production, consumption, trade, domestic price, added-value, farm income and welfare distribution. On the other hand, the magnitude and distribution of the impacts would brighten the future of the industry. Therefore, an estimation of the magnitude and distribution of these impacts is important in an effort to formulate an appropriate export tax rate relatively fair to producers, consumers and the government.

1.2 Research Problem

The CPO industry is expected to play a greater role in the international market for oils and fats. Basiron (2002), Sultoni and Susila (1998) and Pasquali (1993) projected that the growth rate of CPO production would be the fastest among edible oils. CPO has been predicted to overtake soya bean oil as the biggest oil traded in the world oil market. The market development of CPO will even be faster because of the success of the Uruguay Round (Susila et al., 2004 and Barton, 1993). However, for that to be maintained, it will heavily depend on the comparative advantage of producing CPO by respective countries.
Comparative advantage is a fundamental economic driver in determining the long-term export performance of any industry. By engaging in trade, countries that specialize in producing goods in which they are relatively efficient will maximize their economic benefits. Trade therefore plays a very significant role in the economies across based on their comparative advantage. The developing countries like Indonesia are relatively small as open-economies and therefore, rely on income earned from export to create jobs, buy imports, and maintain an overall healthy balance in external accounts. Furthermore, these countries are fiscally dependent on international trade transactions for revenue to finance government operations and increasing external debt payments.

The constraints of a small-sized economy render a country to open its economy and integrate into the global trading system. In micro-states, the smallness of domestic markets drive firms to seek external markets, while at the same time, limited domestic resources increase the need for consumers and producers to buy goods and services abroad. The openness of Indonesia is evident through the trade openness indicator, measured as exports and imports of goods and services as a percentage of output.

Indonesian CPO has been one of the leading agricultural exports that earn foreign exchange for the country. The export market is quite strong for the Indonesian CPO. More than 100 countries are found on the list of countries as destinations of Indonesian palm oil, mainly through direct export. Major importers are India, the Netherlands, China, Pakistan, Bangladesh, United Kingdom and Malaysia. As the production increases, the volume of export increases as well while local demand remains stable or at times only increases slightly. The export of palm oil consists of Crude Palm Oil and Processed Products which comprise of
Refined, Bleached and Deodorized Palm Oil (RBD PO), RBD Palm Olein, RBD Stearin and Crude Olein. However, Indonesia does not have the monopoly to solely export CPO to the above countries hence faces a serious competition from other CPO producers. It therefore has to be competitive in order to have control of the market.

The competitiveness and performance of a particular product depends on its productivity trend, export and its market share in such export markets where the product is traded. Its export capability will be judged generally by its contribution on the economy through foreign exchange earnings. This is realized through the examination of its share in the GDP of the economy.

Due to the importance of the crude palm oil to the Indonesian economy, and the world over, the Indonesian government decided to impose export tax on its CPO. This was intended to improve the benefits of the local CPO producers and consumers. The effect of this export tax needs to be critically studied to find out whether it has positively contributed to the Indonesian CPO sector or it has led to a deterioration of the sector. Therefore, it would be appropriate to assess the performance of Indonesian CPO in the world market and the impacts that export tax has on the CPO sector. This would result in the forecasting of the benefits of massive investments employed in the CPO sector and find out whether it would be a profitable venture for the Indonesian economy.

Therefore, the study wishes to answer the following questions

1. What is the performance and competitiveness of Indonesian CPO against other CPO exporters in the world market?
2. What is the position of Indonesia in the world market as CPO exporter?
3. What is the impact of the CPO export tax on Indonesian CPO industry and specifically on domestic price, investment, production, consumption, export, employment, added-value, cooking oil price, government revenue, producer surplus and consumer surplus.

4. What strategies would make Indonesia improve its market share in the world market?

1.3 Objectives

This study has three main objectives that are listed as follows:

1. To find out the export competitiveness of the Indonesian CPO in the world market.

2. To assess the impact of CPO export tax on Indonesian CPO industry. In addition, it will assess the effect of exchange rate on Indonesian CPO industry.

3. To propose strategies that can improve the competitiveness of Indonesian CPO in the world market.

1.4 Scope of Study

Farm production and the point of export are the focal points for the analysis of comparative advantage and competitiveness, concentrating on performance models. The concepts of competitive and comparative advantage are applied as measures of economic profitability. The competitiveness measures the efficiency of commercial activities of individual producers and firms in the international markets.

The research considered the production, yield, export and competitiveness of Indonesian crude palm oil in the world market. It focused on production at the
national level. Growth trend of oil palm plantation in Indonesia was considered and the results should reveal whether Indonesia is an efficient producer and exporter of crude palm oil. The study further considered the export of crude palm oil to the international market and its contribution to the Indonesian economy. The performance of the CPO weighed against other leading world CPO exporters. The global CPO demand was analyzed and compared to the export quantity from Indonesia to establish the position of Indonesia in the CPO market.

Further, the effects of government policies especially export tax and exchange rate on the performance and Competitiveness of CPO industry were critically analyzed. The competitiveness of CPO were measured using revealed comparative advantage (RCA) and export competitive index, while effects of export tax and exchange rate were analyzed using simultaneous and single econometric equations respectively. The strategies were formulated through the SWOT analysis method that involved interviews with stakeholders in the Indonesian CPO industry.

The limitations experienced in this research included limited finance that could not allow the researcher to thoroughly visit oil palm plantations so as to have first hand information from the farmers. The data used also were mainly at the national level since local level data were inadequate. The export data could not differentiate the quantities exported by Indonesians and Malaysians who own plantations in Indonesia. This made it difficult to disaggregate the share of export recorded as Indonesian CPO yet in actual fact should be recorded as Malaysian exports.