



SUMMARY

BENNY GIOVANNI CHRIESTY KABAN. Integration Analysis of Crude Oil Price, Vegetable Oil Price and Biodiesel Production. Supervised by NOER AZAM ACHSANI dan DS PRIYARSONO.

World energy consumption continues to increase rapidly each year in line with technological developments and economic activity. WEC (2014) showed that in 2011, 82% of world energy was produced by fossil energy, where oil was a mostly used fossil fuel, especially in the field of transportation. To overcome the problem of limited oil supplies, the scientists have discovered an alternative energy source that can be used as a substitute for crude oil, known as biodiesel. The raw material for produced biodiesel was derived from vegetable oil. Thus, it has an impact on the development of vegetable oil which is the main raw material of biodiesel production. The use of biodiesel as an alternative energy source can supplement or replace the role of petroleum that will led to the creation of economic relations between these commodities (Applanaidu *et al.* 2011). The linkages that arise between oil, biodiesel and vegetable oil which caused by limited supply of petroleum make the increasing demand for biodiesel, and this will cause the integration between the crude oil, biodiesel and vegetable oil.

In relation to Indonesia, this research see how the integration between oil, vegetable oil, and biodiesel at the international level was transmitted to Indonesian economic condition. This study used Indonesian CPO prices and inflation of Indonesia as variables to see the impact of this integration toward Indonesian macroeconomics condition. With this study we could see how the response of Indonesian domestic conditions that can be used as consideration for decision-making by the various parties, such as investors, corporations, and the government of Indonesia.

The results in the first part of this research, which focused to see the integration of the variables in the international level, showed that IRF and FEVD analysis came with result that fluctuations in the price of world CPO's was the most influential variable to another variable fluctuations in the long term. Meanwhile, the impact of this integration in Indonesian macroeconomic showed that the fluctuations of Indonesian CPO price was strongly influenced by fluctuations of world CPO price, fluctuations in of Indonesian CPO price itself, and the fluctuation of crude oil price with the greatest percentage derived from world CPO price amounted to 76.90% in short-term and 70.30% in the long term. Indonesian CPO price fluctuation caused by fluctuations of global biodiesel production was very small. this indicated that the use of Indonesian palm oil as a raw material for biodiesel production in Indonesia was very low.

This study showed that fluctuation of Indonesian inflation was strongly influenced by fluctuations of Indonesian inflation in the previous month. Meanwhile, the effect of other variables fluctuations in this study were only small on the variable of Indonesia inflation. Based on this result could be concluded that the fluctuations in other variables that exist in this study did not had a big impact on Indonesian macroeconomic condition, particularly on inflation side.

Key words: Biodiesel, Crude Oil, Inflation, Integration, Vegetable Oil.

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