

TOWARD INDONESIA'S AGROINDUSTRIES COMPETITIVENESS: THE CASE OF BIOETHANOL DEVELOPMENT FROM SUGARCANE BASED INDUSTRIES

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Abstract

World oil price has been fluctuating throughout the years, however the trend continue to increase. Due to limited sources of oil production and high demand for world oil, it is predicted in ten years from 2010, world oil price could even reach as high as triple digit per barrel. Thus countries around the world have continuously tried to produce alternative energy, including Indonesia. The government had been supportive in trying to develop this industry, including roadmaps and target for alternative energy production, to reduce the dependence on fossil fuel until the next ten years to come. The objective of this paper is to study the bioethanol industry developed by the PTPN X. The bioethanol industry is still at its early stage in Indonesia. Problems to develop this industry includes finding the most potential raw materials used, availability of the industry, stage of competition with other uses of the raw materials until end product and marketing. From many potential raw materials, sugarcane is one of the most potential sources of bioethanol. PTPN X case study indicated that bioethanol can be developed along with supporting factors such resource, technology and company size. The comparative advantage of the PTPN X is the ability to incorporate various problems from upstream to downstream of the supply chain of bioethanol. Methods such as the EPC, ANP, Diamond Porter Model and case study of PTPN X are used to demonstrate the potential of sugarcane as an alternative energy and the ability of PTPN X to develop this industry.

Keywords: *sugarcane, bioethanol, PTPN X.*

Introduction

As Indonesia became the world's fourth most populous country in the world in 2011, the demand for fossil fuel continues to increase. Indonesian have been used to the cheap oil price, government policy which heavily subsidized this sector had become a boomerang for the government, causing the country to be a net importer for fuel. In 2005, Indonesia along with other countries in the world started to find other alternative energy sources, such as biofuel. As a renewable energy from plants, biofuel could be categorized into biodiesel and bioethanol. Bioethanol are eco-friendly energy which are derived carbohydrate and sugar components from plants, such as sugarcane, sweet sorghum, cassava, sweet potato and also sorghum. A study carried out by Indahsari *et al* (2012) shows that the current bioethanol industry in Indonesia has been stagnant. Problems arise

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