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Market Power Analysis of Soybean Commodity In East Java

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Abstract

The purpose of this study is to analyze the market power of soybean price. Data used in this research was the statistic data of Time series (1989-2008). Data was estimated by using OLS (Ordinary Least Square). Before estimating the data, the stationary condition of every variable was tested by using ADF Test (Augmented Dickey-Fuller Test). The results found that market power significantly affects soybean price, value of conjectural elasticity 0.39162. Market power can increase the price of processed soybean products amounted to 38.8161 percent in output markets and increase the wholesale price of soybean 19.3981 in the input market. Soybean prices are set by government policy to encourage the local soybean production increased from farmers and to the development of soybean industry, need to consider the influence of market power on soybean price.

Keywords: Marketing, Soybean, Oligopoly, Industry and Conjectural elasticity

1. Introduction

Oligopoly in soybean market can be indicated by the authority of some soybean wholesale traders and industries which use soybean as raw material. In oligopoly market, the wholesale traders or soybean industries have the power in deciding the price, the maximization profit is gotten when *marginal revenue* (MR) is equal to *marginal cost* (MC). Oligopoly power in pricing will be bigger if there is collusion among oligopolies.

The power of oligopoly market in pricing strongly depends on demand elasticity and conjectural, when the high farmers' supply will lower the price that the farmers get because of the demand inelasticity and supply elasticity which reactivate to the price changing in the stagnant farmers' selling price (Appelbaum, 1979 and Sexton, 1990).

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Beside conjectural elasticity, another indicator which can be used to measure the power of oligopoly market in pricing is Lerner index (Sheperd, 1990). In this research, market power was analyzed from conjectural elasticity.

According to Chalilet al. (2006), market power created by oligopoly is often seen as a problem because it often creates inefficiency, decreases social welfare, and leads an unfair condition in income distribution among marketing agents. Because of that, the government intervention is needed to decide a policy which can give contribution in social welfare, the efforts of increasing the soybean farmers' income and the development of soybean industry.

The problem of this study is how big the influence of market power to soybean price is. Related to that problem, this research purposes to analyze the influence of market power to soybean price.

2. Materials and Methods

2.1. Market Power Measurement Model

2.1.1. Lerner Index

In 1934, A.P. Lerner served the concept of monopoly and its measurement. He considers monopoly level as price proportion which is signed by marginal cost. Later, this concept is known as Lerner Index that is specifically formulated by Sheperd into (Sheperd, 1990):

$$L = \frac{p - mc}{p} \tag{1}$$

L = monopoly level or Lerner Index, mc = marginal cost, and p = output price. Lerner (1934) defines monopoly power level as monopoly revenue percentage per output unit. On the other words, it can be also defined as markup percentage above marginal cost. In the perfect competitive market, there is no markup, and Lerner Index (L) is zero. On the other hand, in pure monopolistic, Lerner Index is one.

In profit maximization when marginal cost is equal to marginal revenue, Lerner Index may be the inverse of demand elasticity.

$$\frac{p - mc}{p} = -\frac{1}{\varepsilon} \tag{2}$$

Based on this equation, the low demand elasticity can cause industry to have a high power market. In high demand elasticity, price ascending can influence consumers to lower their demands. Because of that, seller cannot control the high price. The demand elasticity of industry is still earmarked by market demand and the supply elasticity of other industries;

$$\varepsilon^j = \frac{\varepsilon_d - \varepsilon_s^j - m^j}{m^j}$$

and Lerner Index can also be written as:

$$\varepsilon^j = \frac{\varepsilon_d - \varepsilon_s^j - m^j}{m^j} \tag{3}$$

m^i means industry, m^j means market share,