

ABSTRACT

This research aims to analyze the technical efficiency level and its determinants in Indonesian sugar industry with ISIC code 15721 and 10721 during the period of 2005 – 2013. To measure technical efficiency level, Data Envelopment Analysis (DEA) is used with input variables are capital, raw materials, labour and energy, while output variable is represented by total production. In addition, to analyze the determinants of efficiency level in Indonesian sugar industry, this research uses the Structure-Conduct-Performance (SCP) framework and to estimate the determinants of technical efficiency, the linear regression model with Tobit model is applied. In this research, Technical efficiency (TE) level is a performance indicator used as dependent variable. Independent variables are firm size (SIZE), firm age (AGE), dummy variable to represent the firm ownership, market share (MS) and price cost margin (PCM).

The results show that the firm with code 46786 experienced the highest technical-efficiency level. Meanwhile, the firm with code 25435 has the low technical-efficiency level. Tobit regression shows that market share (MS) and PCM has positive influence toward technical-efficiency level. Firm size (size), firm age (AGE) has negative influence on technical-efficiency level. The results also find that there is no difference on technical-efficiency level between the state-owned firms and others.

Keywords: technical efficiency, sugar industry, Data Envelopment Analysis (DEA), Structure Conduct Performance (SCP), Tobit model