Analysis on the Management Efficiency of Mandatory Audited Agricultural Companies: Using Data Envelopment Analysis

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ABSTRACT

Korean government has promoted agricultural companies to enlarge the size of management system in farm level, and thus Korea has many large-size agricultural companies including 95 mandatory audited agricultural companies. The mandatory audited agricultural companies are located at the highest level of agricultural companies, and whether the management of mandatory audited agricultural companies are efficient or not is the one of the most important issues. The purpose of this paper is to analyze the management efficiency of mandatory audited agricultural companies, through the DEA (Data Envelopment Analysis) and WMW (Wilcoxon-Mann-Whitney) rank test. The results of analyses present that the external audit agriculture company need to increase the input with the improvement of technology. It’s also found that management number of years, education and training costs, the increase in advertising expenses offer a positive impact on the management efficiency of the external audit agriculture company. These findings in this paper may offer some policy implications for Korean government.

Key words: mandatory audited agricultural companies, external auditing, management efficiency, DEA (Data Envelopment Analysis)

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I. Introduction

In Korea, the scale improvement of farm business is one of the most important tasks of government, in order to increase the efficiency of farm business and to get the benefit from the economy of scale. Korean government has promoted agricultural companies to enlarge the size of management system in farm level, and Korea has many large-size agricultural companies including 95 mandatory audited agricultural companies in 2013. The mandatory audited agricultural companies are the biggest farm business companies and positioned at the highest level of agricultural companies. Therefore, whether the management efficiency of the mandatory audited agricultural companies are efficient or not and how the mandatory audited agricultural companies should increase the management efficiency are the most important issues for Korean government officers and researchers.

Some previous studies analyzed the efficiency of management system in agricultural sector. Park (2003) evaluated the management efficiency of RPC(Rice Processing Complex) using DEA and Noh and Kim (2009) discussed about the main indices of management of agricultural corporations. Jang and Lee (2010) also used DEA to analyze the management efficiency of forestry corporations. In addition to them, many studies use DEA for the discussion about efficiency of business unit in agricultural sector or non-agricultural sector (Kim (2010), Son (2008), Kim et al. (2011), Kim (2013), Park and Yoo (2013), Ryu (2014), Cho (2014), and Noh (2014)). However, these papers could not focus on the analyze the management efficiency of mandatory audited agricultural companies.¹)

1) Especially, this paper has some clear differences with Noh (2014) as follows: First, this paper measures the management efficiency of 71 mandatory audited agricultural companies with audit opinion of “unqualified (clean).” Second, this paper tried to analyze and compare agricultural companies in agricultural production sector and non-agricultural-production sector. Third, this paper considered more variables than Noh (2014) to get deeper and specific insights. Forth, this paper conducted Wilcoxon- Mann-Whitney rank test for getting better and various implications.