Evaluation of Agriculture-Related Enterprises Productivity Based on Portfolio Measurement - Data Envelopment Analysis Models

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Abstract

The development of agriculture-related enterprises is the key to acceleration of traditional agricultures transformation, development of modern agriculture and breakthrough for construction of new socialist rural areas, by which the enhancement of productivity of agriculture-related enterprises is the only way to the healthy development. DEA model is a better measurement method for productivity than others. Although current literatures on data envelopment analysis have achieved certain results, there are many branches of data envelopment analysis affect the timeliness of scientific decision-making, combining with different models provide different paths for improving the efficiency of invalid unit, which Make it difficult to accurately reflect the main features of socio-economic complex systems development in a timely manner. Therefore, it is necessary to construct integrated evaluation of data envelopment analysis models for assessment of agriculture-related enterprises, statistical test being carried out before and after verification. With conclusions of comprehensive evaluation, lack of input and redundancy of output are analyzed, which will provide bases on improvement methods of agriculture-related enterprises productivity.