

Measuring the efficiency in Taiwan LCD panel industry: An application of
Data envelopment analysis and Grey relational analysis

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Abstract

In the face of a perfectly competitive environment, it has long been considered important for businesses to formulate marketing completion strategies and upgrade the quality of services provided. In formulating competition strategies, performance measurement is an imperative. This study uses data envelopment analysis and grey relational analysis methodologies to estimate the performance measurement and pinpoint the top performer firm within Taiwan liquid crystal display industry (LCD) for the period of the year 2011. A total of 50 firms were initially considered and 46 were selected. The data envelopment analysis was first conducted to quantitatively compare the performance measurement among firms. Recommendations to improve their performance are given based on the analysis result. The results are then compared with grey relation grades to find out the best performer company. The result from this study is expected to offer inefficient firms a quantitative guidance on how to become efficient.

Keyword : Performance measurement, Data Envelopment Analysis, Financial Ratio Analysis.