Performance evaluation of the Semiconductor industry

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Abstract

The development of Taiwan’s semiconductor industry began in 1966. After a long period of development, the current market size ranks the fourth worldwide, which is one of the high technology industries that has the highest developing potential, it also possesses considerable weight in the industrial structure. [1].

This study selects ten companies from the database of Taiwan Institute of Economic Research (TIER)’s semiconductor industry, and then uses the Data Envelopment Analysis (DEA) as the study method. The operating costs, operating expenses, fixed assets, and total assets are considered as the inputs, while the operating net income is considered as the output, with these factors an evaluation model is established in order to analyze the operating performance of the companies.

With regards to the existence of the enterprise, the effectiveness of operating performance possesses a critical factor. The quantifying formula analysis of DEA can obtain a more impartial and objective result of the performance evaluation, and then this result are used to analyze the competitiveness of the enterprise, so as to adjust its operating strategies, strengthen its internal management; as a result the continuously operating objective can be reached.

Keywords: Semiconductor industry, DEA, performance