

Evaluation of solar PV industry in Taiwan
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Abstract

With natural resource scarcity and environmental protection, solar energy is a promise of clean and plentiful energy. Because of the success in semiconductor industry and TFT-LCD industry over the past decade, Taiwan has a strong background and foundation for developing the photovoltaic industry, which requires very analogous technology and less complex process than semiconductor/TFT-LCD manufacturing. Taiwan's photovoltaic industry can achieve a strong position because of the large global demand from renewable energy and the technical advantages obtained from the semiconductor/TFT-LCD industries. However, photovoltaic products suffer a large difficulty in high production cost with low conversion efficiency in present. Hence, firms today need to stress research and development, product differentiation and to integrate the supply chain in order to acquire the highest benefits in the market. This study integrates data envelopment analysis (DEA) and analytic hierarchy process (AHP) to evaluate the business efficiency of firms in Taiwan's photovoltaic industry. The findings shall help the firms determine their strengths and weaknesses and provide directions for future improvements in business operations.

Keyword : Solar PV Industry; Data Envelopment Analysis (DEA); Analytic Hierarchy Process (AHP)