

# The Application of Fuzzy ANP in the Development of New Product Decision-making—a case study of the solar module industry

陳文欽, 張惠萍

Industrial Management

Management

wenchin@chu.edu.tw

## Abstract

Due to the increasing advancement in technology and limited resources as well as environment being polluted at the same time, the natural solar energy, which has the advantage of environmental protection and being the newly developed approach, will become the rushing field of study around the world in order to implement energy efficiency and reduce carbon pollution. In the meantime, the solar industry technology and new product development have become the considerations to the survival and competitiveness of enterprises. In this study, literature review and expert interviews are utilized to obtain five major key dimensions and 19 subordinate criteria regarding new product development. The Interpretive Structural Model (ISM) is employed to obtain the dimension-dimension and criterion-criterion dependence relationship, and used the Fuzzy Analytic Network Process (Fuzzy ANP) to determine the top priority weight for assessment improvement in the new product development solutions of the enterprises.

Keyword : Solar energy, Interpretive Structural Mode, Fuzzy Analytic Network Process