

A performance evaluation model on R&D-A notebook manufacturer study

Chun-Yu Lin, 李欣怡, Wei-Han Hu

Technology Management

Management

amylee@chu.edu.tw

## Abstract

The primary goal of a firm is to increase the competitiveness, unique strength and R&D creativity in the competitive environment. A firm can survive in the market only if new technology and products are created. Developing appropriate R&D performance evaluation indicators is an enterprise's key factor to success. As a result, how to construct a R&D performance evaluation framework to evaluate the R&D capability has become the first priority for a firm to consider. The purpose of this study is to develop a model for evaluating the R&D performance in high-tech enterprises in Taiwan. The model is constructed after a comprehensive review of relevant literature and the consultation of domain experts, scholars and practitioners in R&D management in Taiwan. Qualitative and quantitative methods, including balanced scorecard (BSC) and fuzzy analytic hierarchy process (FAHP), are applied to aggregate experts' opinions, select the most appropriate evaluating criteria, and calculate the importance weights of different perspectives and criteria. After the construction of R&D performance evaluation model, an empirical study is carried out to examine the practicality of the model. The model can be tailored based on the differences in the scale of a firm, industrial characteristics, and short-term, medium-term and long-term strategies, in order to develop a suitable R&D performance evaluation model for the firm.

Keyword : Balanced scorecard (BSC), Collaborative design, Performance evaluation, Fuzzy analytic hierarchy process (FAHP)