Evaluation the Performance of IT Department Based on Fuzzy Multigranular Linguistic Variables

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ABSTRACT

As market competition is globalized, business organizations are much complicated with wild applied information technology and information system, and the demands are becoming more and more vital and reliant. The evaluating process of professional ability and work performance for the business information technology department (ITD), however, are often facing many linguistic indistinctness and un-quantifiable uncertain factors: These factors will increase the difficulties on performance evaluation and appraisal of ITD. Therefore, this research proposes a method based on fuzzy set theory combining diverse semantics with balanced scorecard to construct performance evaluation model on the business information technology departments. It will provide the business managers or CIO a way to efficiently evaluate the performance of business information technology department. According to the case study of this research, evaluators could easily proceed the performance evaluation on business information department by using fuzzy semantics. Using the result of linguistic transformation, we will indicate the strength and weakness of the information technology department. Finally, we can increase the performance of the information technology department base on the evaluation model.

Keywords : Information technology department ; Performance evaluation ; Balanced scorecard ; Fuzzy set theory ; Fuzzy analytical hierarchical process ; Linguistic variable

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