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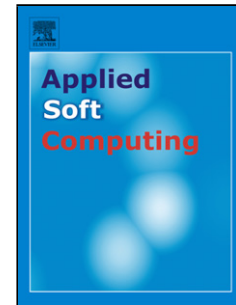
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Technology Credit Scoring Model with Fuzzy Logistic Regression

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Abstract

Technology credit scoring models have been used to screen loan applicant firms based on their technology. Typically a logistic regression model is employed to relate the probability of a loan default of the firms with several evaluation attributes associated with technology. However, these attributes are evaluated in linguistic expressions represented by fuzzy number. Besides, the possibility of loan default can be described in verbal terms as well. To handle these fuzzy input and output data, we proposed a fuzzy credit scoring model that can be applied to predict the default possibility of loan for a firm that is approved based on its technology. The method of fuzzy logistic regression as an appropriate prediction approach for credit scoring with fuzzy input and output was presented in this study. The performance of the model is improved compared to that of typical logistic regression. This study is expected to contribute to practical utilization of the technology credit scoring with linguistic evaluation attributes.

Keywords

Technology credit scoring; Fuzzy prediction model; Fuzzy logistic regression

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