



## New methods for feasibility analysis of investment projects in uncertain environments

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Project feasibility analysis is a key process in organizations to predict the success of projects in the future. This process becomes complex because it involves multiple criteria, which are evaluated in uncertain environments. This paper presents a model to perform the feasibility analysis of investment projects in uncertain environments using soft computing techniques. The model includes technical, economic, social, and commercial criteria and the methods for its calculation. Traditional economic criteria are extended by introducing triangular fuzzy numbers, which provides greater flexibility and certainty in predicting economic feasibility. The 2-tuple linguistic representation model is used in the qualitative evaluation of the criteria and the calculation of the final results. The model output is the feasibility analysis of the projects, integrating the results of all the evaluated criteria without loss of information, which provides greater interpretability for decision making. The case study and experiments conducted demonstrate that the model is applicable in real environments

and that its ability to predict feasibility is greater than that of other proposals.