

SENSITIVITY ANALYSIS OF OPTIMUM SOLUTION OF GENERALIZED TRAPEZOIDAL FUZZY NUMBER LINEAR PROGRAMMING PROBLEMS

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ABSTRACT

This study aims to perform a sensitivity analysis, namely an analysis of changes in the coefficient of the objective function and the coefficient of the right-hand side of the allowable constraint function, so that it is not necessary to calculate from the initial iteration. In this study using the ranking function of the generalized trapezoidal fuzzy number to obtain the optimum solution of the generalized trapezoidal fuzzy number linear programming problem using the generalized fuzzy simplex method. We define a ranking function of a generalized trapezoidal fuzzy number as r . Based on this definition we can construct generalized fuzzy simplex method. Ranking function method play an important role to find the optimum solution of generalized trapezoidal fuzzy linear programming problem. This method can solve both standard maximum problem and non-standard maximum problem. Based on this condition, this study will investigate whether the post-optimum sensitivity analysis for this model with this solution method is applicable.

The result of this study, we obtain that, at certain intervals, both the change in the coefficient of the objective function and the change in the right-hand side of the optimal solution constraint function can be obtained without performing calculations from the beginning. This is demonstrated in some of the cases given. Finally, it can be concluded that the sensitivity analysis on the generalized trapezoidal fuzzy number linear programming problem uses the method.

Kata Kunci: *generalized fuzzy number, ranking function, generalized fuzzy simplex method, sensitivity analysis*