

## **ABSTRACT**

### ***FUZZY PROGRAMMING APPROACH FOR SELECTION AND PRODUCTION PLANNING PROBLEMS CONSIDERING DISCOUNTS AND FUZZY PARAMETERS***

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The supplier selection problem involves allocating the required number of raw materials efficiently to each supplier to minimize the cost of purchasing raw materials. In addition, the production planning problem is related to determining the number of products produced. To achieve maximum revenue, decisions must be made optimally in both problems. In this study, a fuzzy programming approach can be used to support decision making in supplier selection and production planning problems that contain discounts and fuzzy parameters. The formulated model display scenarios involving the number of raw materials, selected suppliers, the number of raw material deliveries, and the number of products produced. Through numerical simulations, the effectiveness model is evaluated for its ability to provide optimal solutions. The model is expected to be applied by decision makers.

Keywords: fuzzy programming, discounts, order allocation, fuzzy parameters, production planning, supplier selection.