LINEAR PROGRAMMING APPROACH FOR DECISION MAKING USING SPREADSHEET SOFTWARE

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Abstract

Several optimization software packages are currently available for a variety of applications. The use of spreadsheets as an alternative to traditional software is increasing as more technical professionals observe the benefits that are realized. Managers use informal "optimization" to make decisions almost every day. Organizations use formal optimization methods to address problems across the organization, for decision-making. One such tool is the algebraic formulation of a linear programming (LP) problem which comprises of definitions of the decision variables, an algebraic statement of the objective function, and algebraic statements of the constraints. An Excel Add–In Solver, using spreadsheets is able to solve such an algebraic formulation of LP problem easily. This paper focuses to explore the possibility of generating an optimal solution of a project management problem through spreadsheet software package. Managers can interpret to check the results, fix problems with the model, and find the insights useful for decision-making. This opens new application horizons and new methods for practicing mangers in field for developing models/solutions for solving more complex problems. A numerical example is presented to demonstrate the importance of this technique.