LAGRANGE ANALYSIS FOR

MULTI-OBJECTIVE DECISION MAKING PROBLEMS

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ABSTRACT:

The purpose of this paper is to present sensitivity analysis by lagrange multipliers of nonlinear goal programming problems (convex and nonconvex problems) as one important type of multi-objective decision problems. In addition, it can be used for other typies of multi-objective decision making problems. The analysis is introduced through two matrices of lagrange multipliers; and a suggested algorithm.

Finally illustrated numberical example is presented.

Key words: Multi-objective problem, goal programming problems, convex & nonconvex problems, geometric programming, shadow prices, signomial problem.

I) INTRODUCTION

Usually, for multi-objective decision making problems ... is interest to determine or estimate