Abstract

In this paper we develop a MAT LAB computer program for the optimum allocation for multivariate stratified sampling with non-linear cost function –travel cost. The generalized MATLAB program for solving multi variate or multi objective linear programming based on with some major modifications in earlier algorithms. The proposed modified algorithm as well as MATLAB program simplifies the earlier algorithm on Multivariate linear programming problems. The problem of determining the optimum allocations are formulated as Nonlinear Programming Problems, in which each NLPP has a convex objective function and a non-linear cost constraint. The NLLP's are then solved using Lagrange Multiplier technique and the explicit formula for variance is obtained.

References

Computer Program in MATLAB for Optimum Allocation for Multivariate Stratified Sampling


Index Terms

Computer Science Information Science

Keywords
Non linear programming  Multivariate  Stratified sampling  optimum allocation