



Application of Linear Programming Model in Small Scale Industry

- Alfia Kamal • Pooja Pallavi • Priya Kumari
- R. N. Singh

Received : November 2017

Accepted : March 2018

Corresponding Author : R. N. Singh

Abstract : *A study was conducted to observe the different constraints in the production of notebooks by a small scale industry in Patna due to scarcity of different resources such as raw materials, labor hours, machine hours and restrictions in marketing. An attempt has been made to apply Linear Programming technique to achieve maximum profit by fulfilling all constraints in production process of this product mix industry.*

Keywords : *product mix industry, linear programming, decision variables, objective function, feasible solution.*

Introduction:

Almost every business and economic situations are concerned with a problem of planning activity. In every case, there are limited resources at our disposal and our problem is to make a proper use of resources so as to give the maximum profit or yield the maximum production. These problems are referred as the problem of constraint optimization. Linear Programming(LP) is a technique for determining an optimum schedule of independent activities in the view of available resources (Swarup et al.,2015).

A general linear programming includes a set of simultaneous linear equation(or inequalities) which represent the condition of the problem and a linear function which expresses the objective function of the problem (Prasad,2014).

The word programming in LP refers to the mathematical modeling of LPP. It has nothing to do with computer programming. Interestingly LP is a favorite tool in hands of Operation Research professionals because it is simple, easy to understand and robust. Here robust means it is perfect for nothing but good enough for everything. Unfortunately no real world problems are close

Alfia Kamal

B.Sc. III year, Statistics (Hons.),
Session : 2015-2018, Patna Women's College,
Patna University, Patna, Bihar, India

Pooja Pallavi

B.Sc. III year, Statistics (Hons.),
Session : 2015-2018, Patna Women's College,
Patna University, Patna, Bihar, India

Priya Kumari

B.Sc. III year, Statistics (Hons.),
Session : 2015-2018, Patna Women's College,
Patna University, Patna, Bihar, India

R. N. Singh

Assistant Professor, Dept. of Statistics,
Patna Women's College,
Bailey Road, Patna-800 001, Bihar, India
E-mail : rnsingh09@gmail.com