

There are three **estimation times** involved in **PERT**;

Optimistic **Time Estimate** (TOPT),

Most Likely **Time Estimate** (TLIKELY),

Pessimistic **Time Estimate** (TPESS).

In **PERT**, these three **estimate times** are derived for each activity. This way, a range of **time** is given for each activity with the most probable value, TLIKELY.

Limitations of Operations Research

Dependence on an Electronic Computer: O.R. techniques try to find out an optimal solution taking into account all the factors. In the modern society, these factors are enormous and expressing them in quantity and establishing relationships among these require voluminous calculations that can only be handled by computers.

Non-Quantifiable Factors: Operation Research provide a solution only when all the elements related to a problem can be quantified. All relevant variables do not lend themselves to quantification. Factors that cannot be quantified find no place in O.R. models.

Distance between Manager and Operations Researcher: O.R. being specialist's job requires a mathematician or a statistician, who might not be aware of the business problems. Similarly, a manager fails to understand the complex working of O.R. Thus, there is a gap between the two.

Money and Time Costs: When the basic data are subjected to frequent changes, incorporating them into the O.R. models is a costly affair. Moreover, a fairly good solution at present may be more desirable than a perfect O.R. solution available after sometime.

Implementation: Implementation of decisions is a delicate task. It must take into account the complexities of human relations and behaviour.