

REVIEWER'S REPORT

Manuscript No.: IJAR-59121

Title: Refinement Of Inventory Policy For Perishable Item Under Combined Effect Of Inflation, Limited Storage And Hybrid Backlogging Function.

Recommendation:

- Accept as it is
 ✓ Accept after minor revision.....
 Accept after major revision
 Do not accept (*Reasons below*)

Rating	Excel.	Good	Fair	Poor
Originality		✓		
Techn. Quality		✓		
Clarity		✓		
Significance		✓		

Reviewer Name: Dr S. K. Nath

Detailed Reviewer's Report

Strength of the study:

- Relevant mathematical inventory management problem
- Integrates several important inventory factors
- Clear assumptions and notations are provided
- Mathematical formulation is attempted
- Holding, deterioration, shortage and purchasing costs are considered
- Numerical examples and sensitivity analysis are included
- Effects of deterioration and backlogging parameters are demonstrated
- The model has potential practical relevance

Weakness of the study:

- Several variables are inconsistently defined
- The demand and inflation parameters appear confused
- Some equations are difficult to verify
- The storage constraint is not clearly incorporated
- Optimization procedure is not adequately explained
- Optimality conditions are not demonstrated
- Some numerical values lack sufficient explanation
- Important parameters appear without clear definition
- Grammar, formatting and mathematical presentation need major correction

Reviewers Comments:

The manuscript addresses a relevant problem in perishable inventory management and attempts to combine inflation, deterioration, limited storage and hybrid backlogging in one model. The inclusion of numerical examples and sensitivity analysis is useful. Ethical clearance is not applicable because this is a mathematical modelling study without human or animal participants. However, major revision is required. The mathematical formulation needs careful checking because several parameters are inconsistently defined or changed between sections. In particular, the use of gamma for both demand growth and inflation creates confusion, while other parameters such as delta, alpha and m are not consistently introduced. The storage capacity constraint and the actual optimization procedure also require clearer explanation. The numerical results should be reproducible from the stated equations and assumptions. Grammar, spelling, sentence construction, equation formatting and references require substantial editing. Overall, the topic is worthwhile, but the mathematical model and numerical analysis need considerable clarification before publication.

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