

Judul: Developing Simulation Optimization Model to Minimize Total Inventory Cost under Uncertain Demand

1. Bukti submit artikel

2nd Asia Pacific Conference on
**Industrial Engineering and
Operations Management**
Sept. 14-16, 2021, Surakarta, Indonesia
Host: Sebelas Maret University (UNS)

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2. Bukti review artikel

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Review # 1

Recommendation:
Accept paper conditionally with major revision

Comments:
The research methodology needs to be discussed after the literature review.
Reference citing is poor where some parts are not referred to scientific papers.

Review # 2

Recommendation:
Accept paper conditionally with minor revision

Comments:
The article deals with an interesting issue.
The overall write up and contents are satisfactory and acceptable for publications.
Please revise the title and add "..... optimization model....."
Please establish the research gap and then Clearly specify the objectives.
The method seems disconnected, please properly start your method with some introduction and then make a good connection between equations and algorithm etc.

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3. Bukti article accepted

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ID: 377
Title: Developing Simulation Optimization Model to Minimize Total Inventory Cost under Uncertain Demand
Final Status: Paper Acceptance - Indonesia
Final Status Email Subject: Paper Acceptance - 2nd Asia Pacific IEOM Conference 2021 in Indonesia
Final Status Email

Paper Acceptance - 2nd APIEOM Conference 2021

Dear Mufida:

Congratulations! The conference organizing committee is pleased to announce that your paper (ID 377: Developing Simulation Optimization Model to Minimize Total Inventory Cost under Uncertain Demand) has been *accepted for presentation and publication* in the 2nd Asia Pacific International Conference on Industrial Engineering and Operations Management, Surakarta, Indonesia, September 13-16, 2021. Host university is Sebelas Maret University (UNS). All full papers will be peer reviewed and indexed in SCOPUS. During publication, the IEOM publication team may ask to revise your submission. You can see review comments here - <https://www.xcdsystem.com/IEOM/abstract/index.cfm?ID=Vts8g4A>.

Program - <http://ieomsociety.org/program-indonesia2021.pdf>

Due to the global pandemic, the event will be fully virtual via zoom.

- Committee: <http://ieomsociety.org/indonesia2021/committee/>
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4. Bukti article published

Proceedings of the Second Asia Pacific International Conference on Industrial Engineering and Operations Management
Surakarta, Indonesia, September 14-16, 2021

Developing Simulation Optimization Model to Minimize Total Inventory Cost under Uncertain Demand

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Abstract

Inventory is one of the essential parts in a shop floor, especially in the chicken slaughter houses industry. The uncertain customer demand affects the uncertain raw materials (live chicken). So, to prevent the opportunity loss in business, the availability of live chicken is unavoidable. It affects the high inventory cost. In addition, the high risk of chicken death makes the problem more complicated. Therefore, this research is proposed to minimize the total inventory cost under demand uncertainty by optimizing the economic order quantity (EOQ). This study develops simulation optimization by integrating the Monte Carlo simulation and the Genetic Algorithm. This model optimizes the value of reorder point and reorder quantity in order to minimize the total inventory cost. Some experiments consider the analytical solutions and heuristic by varying crossover, mutation, and population values to provide a global optimum. The result shows the proposed solution reduces 38.95% from the existing total inventory cost.

Keywords

Inventory, Economic Order Quantity, Monte Carlo Simulation, Genetic Algorithm, Simulation Optimization.

1. Introduction

Inventory is raw materials stored and used to suit future or current needs (Nasution & Widyasari, 2020). Inventory control is an important aspect that arises because of the company's excess or shortage of inventory. The chicken slaughterhouse industry is one of the rapidly growing industries that began to depend on the freshness of raw materials