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Optimizing O2O retail strategies for deteriorating products: balancing customer experience and profitability

Sarmee Bose¹, Mitali Sarkar², Shashi Bajaj Mukherjee³, Biswajit Sarkar^{4,5}

¹Department of Mathematics, Meghnad Saha Institute of Technology, Kolkata 700150, West Bengal, India, sarmee.bose@gmail.com

²Department of Hospitality and Tourism Management, Sejong University, 209 Neungdong-ro (Gunja-dong), Gwangjin-gu, Seoul 05006, South Korea, mitalisarkar.ms@gmail.com

³Department of Mathematics, Dr B C Roy Engineering College, Durgapur 713206, West Bengal, India, sashibajaj.mukherjee@brec.ac.in

⁴Department of Industrial Engineering, Yonsei University, 50 Yonsei-ro, Sinchon-dong, Seodaemun-gu, Seoul 03722, South Korea, bsarkar@yonsei.ac.kr

⁵Department of Intelligent Data and Optimization, Yonsei University, 50 Yonsei-ro, Sinchon-dong, Seodaemun-gu, Seoul 03722, South Korea, bsarkar@yonsei.ac.kr

Abstract

Online-to-Offline (O2O) strategies are becoming indispensable in the quickly changing retail landscape as a means of fusing the convenience of online buying with the individualized attention of physical locations. The purpose of this research is to create an enhanced O2O retail system that can efficiently handle a variety of deteriorating product categories, such as perishables and electronics with short shelf lives. The goal of this research is to increase profitability, foster brand loyalty, and improve consumer satisfaction by combining the benefits of both online and physical channels. The research methodology is built on a robust framework that incorporates data from customer surveys, interviews with retail managers, and direct observations of retail operations. This is further enriched by a thorough review of relevant academic literature and industry reports. The study proposes a comprehensive model that takes into account product life cycles, deterioration rates, and the diverse service demands of consumers. Optimization strategies are centred around critical variables such as pricing, advertising investments, customer service costs, order quantities, deterioration cost and setup expenses, all within the constraints of budget and physical space. The effectiveness of the model is verified by sensitivity analysis and numerical tests, indicating a significant influence of optimal resource management on profitability. The findings show that in O2O retail environments, strategic pricing, effective resource allocation, and customized consumer services greatly increase profitability and customer satisfaction. This study provides actionable insights for retailers seeking to refine their O2O strategies, especially in the management of deteriorating products, while balancing operational challenges and enhancing the overall customer experience.

Keywords: Online-to-Offline (O2O) Retail, Deteriorating Products, Profitability Optimization, Customer Satisfaction, Resource Allocation