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Relevant Factors in the Inventory Record Inaccuracy for Retail Companies: A Study in Food Retail Industry

Espinoza Aguirre, Jorge Andrés[a] ; Peña, Mario[b, c] ; Jadan-Avilés, Diana[c] ; Llivisaca, Juan[c]

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[a] Faculty of Chemical Sciences, University of Cuenca, Cuenca, 010107, Ecuador

[b] Research Department (DIUC), University of Cuenca, Cuenca, 010107, Ecuador

[c] Department of Applied Chemistry and Systems of Production, Faculty of Chemical Sciences, University of Cuenca, Cuenca, 010107, Ecuador

Abstract

Retail companies are an essential industry for economic development in every country. In these organizations, at least 60% of the assets correspond to inventory. Therefore, inventory record inaccuracy (IRI) is a problem among these companies. IRI is the gap generated between physical audits and system records, which affects the retailer by changing their book value, increasing economic losses, and providing poor customer service. This study aims to identify the factors that cause IRI in retail companies and, using a mathematical model, works to help retailers minimize the gap between registers. As a consequence, retailers can reduce potential losses in the company. Two mathematical models are proposed for each of the dependent variables: IRI and difference between records. The independent variables considered are quantity of sale of an item, cost, physical audit period, variety of products, product returns, sale price, and quantity sold. This work concludes by comparing both models, highlighting the most influential variables. © 2022, Springer Nature Switzerland AG.

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Espinoza Aguirre, J.A.; Faculty of Chemical Sciences, University of Cuenca, Cuenca, Ecuador; email:jorge.espinoza@ucuenca.edu.ec

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