Performance Evaluation of Supply Chain Management Based on SCOR Model: A Case Study of Halal Chicken Processing Industry in Upper Northern Region, Thailand

Adcharawadee Keawwandee and Chakthong Thongchattu
Department of Industrial Engineering, School of Engineering
University of Phayao
Phayao, Thailand
adcharawadee@hotmail.com, iengin8@gmail.com

Abstract

This study demonstrates a performance evaluation of Supply Chain Management by applying Supply Chain Operation Reference model (SCOR) on a case study of Halal chicken processing industry in Upper Northern region of Thailand, especially Performance section of SCOR Model focuses on the measurement of the outcomes of supply chain process execution (Plan, Source, Make, Deliver, Return, and Enable), this study prioritizes possible related factors that affect business operations by considering indicators such as Logistics, Corporate Social Responsibility, Agility and Responsiveness, Reliability, Costs and Asset Management Efficiency, Marketing, Customer, Quality and Standard, Inventory, and Traceability. This study applies Analytic Hierarchy Process (AHP) for prioritizing five performance attributes of SCOR Model and conducts field survey by collecting data from food industry experts, halal entrepreneur and local Islamic Committee in Upper Northern Region. The result indicates that the most significant attributes or key success factors for Halal chicken processing industry is Reliability, Costs, Agility, Responsiveness, and Innovation by considering minimal bias with low Consistency Ratio (CR.) and summarizing supply chain performance weight with Geometric Mean, respectively. Ultimately, the result of this study provides a guideline for any related food industry in order to create effective strategic plan and to integrate important factors in regard to business’s overall long-term goals, highly competitive performance, and sustainable development.

Keywords
Supply Chain Management, SCOR Model, Analytic Hierarchy Process, Halal, Food Industry

Biographies

Adcharawadee Keawwandee, Ph.D. is lecturer in the Department of Industrial Engineering, School of Engineering at the University of Phayao, Thailand since 2002. Also, she served as the associate dean for Academic Affair at School of Engineering from 2016-2020. She earned B.Eng. in Industrial Engineering from Naresuan University, Thailand, M.Eng. in Industrial Engineering and Management from Chulalongkorn University, Thailand and Ph.D. in Industrial and Systems Engineering from University of Oklahoma, U.S.A. in 2015. She has published national and international conference papers. Her research interests include entrepreneurship and innovation management, product development, quality management, optimization, project management, and six sigma and lean manufacturing. She is a Certified Lean Six Sigma Green Belt, and she has been recognized as a professional management consultant in working with local businesses.

Chakthong Thongchattu is lecturer in the Department of Industrial Engineering, School of Engineering at the University of Phayao, Thailand. He attended as the innovation and business consultant at social innovation driving unit from 2020-2022. He earned B.Eng. in Industrial Engineering and M.Eng. in Manufacturing Engineering from Naresuan University, Thailand. His research interests include data analytics and innovation management, product development, and six sigma. She is a Certified data analytics and social innovation design.