



Extended Abstract | 1st Research Innovations in Sustainable Marketing: A Global Virtual Symposium

## Mitigating Food Waste in the Retail Supply Chain: Marketing Solutions

Jie Zhang<sup>a</sup> | Michel Wedel<sup>a\*</sup> | Martin Bloem<sup>b</sup>

<sup>a</sup>Robert H. Smith School of Business, University of Maryland, College Park, Maryland, United States

<sup>b</sup>Department of Environmental Health and Engineering, Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland, United States

**Keywords:** food waste mitigation, sustainable retailing, technology, supply chain

**Article History:** Published: 5 September 2023

**Extended Abstract:** Food loss and waste (FLW) is a global problem with an enormous magnitude: about one third of the food produced globally is lost or wasted. FLW has not only substantial economic but also social and environmental consequences. While food loss takes place at the production, post-harvest and processing stages in the food supply chain, food waste refers to the loss of edible foods at the retail and consumption stages (Food and Agriculture Organization of the United Nations). In this article, we focus on the problem of food waste. Although not the main source of food waste in relative terms, retailers have a major role to play in food waste mitigation and stand to benefit from it. Because of their unique position in connection to suppliers and consumers, retailers can play an important role in mitigating food waste at all stages of the food supply chain. They can incentivize upstream suppliers to reduce the resources and materials used in food productions and minimize negative environmental impacts. Toward the downstream, retailers can leverage marketing actions to enable and encourage consumers' sustainable purchase and consumption behaviors. Recognizing the urgency of the problem, many retailers have already taken actions to mitigate food waste. We highlight the two most important categories of practices, which are 1) waste reduction and preven-

tion, and 2) surplus food reuse.

Given the important role of retailers in the food supply chain, we believe that marketing scholars have the opportunity to make significant contributions to addressing the global food waste challenge. Our discussion will focus on how to mitigate food waste in retail outlets and by consumers through leveraging digital technologies and marketing knowledge. We first outline the economic, social, and environmental impacts of food waste, and then synthesize current mitigating practices by retailers. We discuss several technologies that are particularly important for mitigating food waste: RFID and blockchain, data analytics and AI, and digital platforms. We propose five areas that offer opportunities for future research and actions on food waste mitigation: 1) standardizing food waste measurement, 2) optimizing the utilization of food close to expiration dates, 3) amplifying good practices among large retailers in high-income countries to small retailers and retailers in low and middle income (LMI) countries, 4) retail intervention programs to encourage sustainable purchases and consumptions, and 5) reducing food waste at the post-purchase stage.



Corresponding author:

Michel Wedel | [mwedel@umd.edu](mailto:mwedel@umd.edu) | Robert H. Smith School of Business, University of Maryland, College Park, Maryland, United States.

**Copyright:** © 2023 by the authors. | **Published by:** Luminous Insights LLC, Wyoming, USA.



This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

**Funding statement**

The author(s) received no financial support for the research, authorship, and/or publication of this article.

**Conflict of interest**

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

**ORCID**

Michel Wedel

 | <https://orcid.org/0000-0002-1244-4923>

**Cite as**

Zhang, J., Wedel, M., & Bloem, M. (2023). Mitigating Food Waste in the Retail Supply Chain: Marketing Solutions. *Business Research Proceedings*, 1(1), 49-50. <https://doi.org/10.51300/BRP-2023-93>

LUMINOUS  
INSIGHTS



© 2023 The Author(s). This open access article is distributed under a Creative Commons Attribution (CC-BY) 4.0 license.

You are free to:

*Share*— copy and redistribute the material in any medium or format.

*Adapt*— remix, transform, and build upon the material for any purpose, even commercially.

The licensor cannot revoke these freedoms as long as you follow the license terms.

Under the following terms:

*Attribution*— You must give appropriate credit, provide a link to the license, and indicate if changes were made.

You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use.

*No additional restrictions*— You may not apply legal terms or technological measures that legally restrict others from doing anything the license permits.