The potential of consumer mobile applications for food waste reduction - A systematic literature review

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Abstract

Household food waste is one of the key sustainability challenges facing the global food system. Various solutions and interventions for addressing this problem have been studied in the literature. Digital technologies such as mobile applications have been suggested as potential solutions, and several such applications have emerged in the market already (Närvänen et al. 2021). Some of them focus on connecting consumers and food services through a platform-based business model like the ResQ Club (Mattila et al. 2020) or Too Good To Go (Vo-Tanh et al. 2021). Others are helping consumers manage their kitchen including food purchases and inventories at home to plan better, such as Cozzo or Total Ctrl. However, the potential of these solutions in reducing consumer food waste is not yet well known. In this study, we conduct a systematic literature review to gain insight on the potential of consumer mobile applications (CMA) to reduce food waste at the consumer and retail level. We ask: What types of CMAs have been studied? and What is the purpose and functionality of the CMAs? As a result, we identified initially 64 publications using the Scopus database with the search words "mobile app*" OR "smartphone app*" OR "app" AND "food waste". In the next phase, we will screen the studies in more detail and analyse their content. Our study examines the disciplinary and/or theoretical background, research methods, the types and features of mobile applications as well as geographical area covered by the studies. Furthermore, we identify whether and how previous studies have measured food waste as part of the research design. We also highlight an agenda for future research on this topic. Our paper contributes to food waste studies in particular as well as more generally to the literature on mobile applications' potential in addressing sustainability challenges.

Keywords: food waste, consumer, mobile application, systematic literature review

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