

<https://doi.org/10.7250/CONNECT.2025.080>

# FIRST INSIGHTS INTO THE EFFICIENCY OF LATVIA'S BEVERAGE PACKAGING DEPOSIT REFUND SYSTEM

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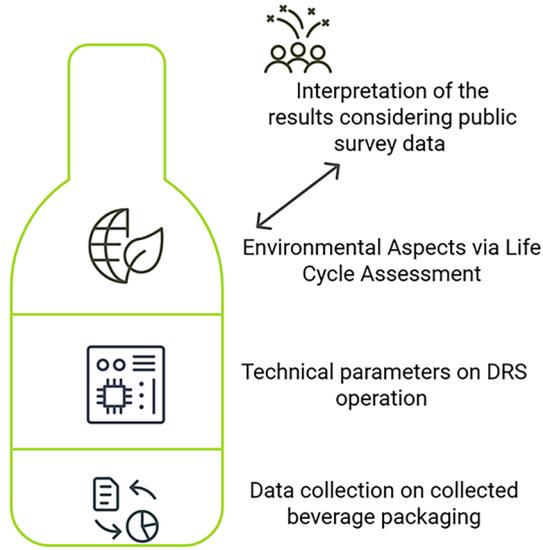
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**Abstract** – From 1 February 2022, a container deposit refund system (DRS) started operating in Latvia with a transitional implementation period of 6 months. It is designed to contribute to the circular economy objectives in Latvia, i.e., to return packaging materials to the economy as recycled resources. Currently, the DRS can accept glass, PET and tin bottles for non-alcoholic beverages, beer and spirits up to 15 %. According to the Latvian DRS operator data, the return rate has increased from 62 % in 2022 to 83 % in 2024. The current research analyses two years of experience with the DRS in Latvia, highlighting its technical and environmental aspects. The study's methodology involves data analysis of collected beverage packaging alongside key operational parameters, including collection system maintenance, transportation distances, and recycling processes. Based on this analysis, a life cycle assessment (LCA) is performed to measure the environmental impact of the system's operation compared to the benefits gained from recovered materials. Considering the significant social impact on the efficiency of the DRS, the study is supplemented with survey data collected in Latvia in 2024, analysing public participation in the system. The survey by Ulla Milbreta *et al.*, conducted among 985 respondents, equally distributed by gender, reveals the following insights significant for the further development of the DRS:

- Financial motivation dominates across all age groups, though its influence diminishes substantially with age, declining from 81.2 % in the 18–25 age group to just 21.2 % among the 65 years old and older. Environmental motivation, cited by 58 % of respondents, exhibits notable variations. It is particularly prevalent among men aged 56–64 (79 %). For men, rates range from 40 % (18–25 group) to 50 % (65+ years). For women, it ranges from 63 % (18–55 years) to 44 % in the 65+ age group.
- Lower participation among older respondents: 19 % (27 % women, 11 % men) of those aged 65+ report not participating in the DRS due to a lack of packaging to return, compared to 0.9 % of women and 7.7 % of men aged 18–25. On average, 9.3 % of the respondents reported not using the DRS system.
- The usage of DRS refunds decreases with age: 57 % of respondents in the 18–45 age groups redeem their deposit money, declining to 42 % in the 46–64 age group and 31 % among 65+. Donations of refunds remain consistent at around 11 % across all age demographics.

**Keywords** – Beverage bottles; LCA; public participation; recycling; waste



Integrated analysis of Latvia's DRS