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The Life Cycle of a Toy in the Circular Economy

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Abstract. The aim of this study is to examine the impact of factors related to awareness of toy reuse and the characteristics of second-hand toys on the supply of toy-related services and products offered by reuse organizations in educational institutions in Slovenia. Current toy design and consumption practices are mostly not circular, as a large share of toys ends up as waste at the end of their use, which increases environmental burdens and highlights the need for more effective reuse models.

The research problem is the insufficient understanding of the factors that influence, within educational institutions, the supply of services and products related to toy reuse. The study links the constructs of awareness of toy reuse, the characteristics of second-hand toys, and the supply of services and products offered by reuse organizations and empirically tests the relationships among them. The study's contribution to literature lies in advancing the understanding of toy reuse from the perspective of the needs and perceptions of educational institutions in a field that has so far been under-researched.

In reviewing the literature, we also identified a gap: existing studies only limitedly address toy reuse in connection with educational institutions as important stakeholders in the circular economy, particularly in the Slovenian context.

In the study, the statistical population comprises 948 educational institutions from Slovenia, including public and private kindergartens and public and private primary schools, based in the Register of Educational Institutions and Educational Programmes, which was available on the website of the Ministry of Education for the 2022/2023 school year, as well as kindergartens and primary schools with an adapted programme, based on lists available on the Ministry's website for the 2025/2026 school year.

The core thesis of the study is that awareness of toy reuse and the characteristics of second-hand toys positively influence the supply of services and products offered by reuse organizations in educational institutions.

Based on the core thesis, three hypotheses (H) were formulated and tested using structural equation modelling. Hypothesis 1: There is a positive relationship between awareness of toy reuse and the characteristics of second-hand toys in educational institutions. Hypothesis 2: Awareness of toy reuse positively influences the supply of services and products offered by reuse organizations in educational institutions. Hypothesis 3: The characteristics of second-hand toys positively influence the supply of services and products offered by reuse organizations in educational institutions.

The study advances understanding of the factors that shape the supply of toy-reuse services and products in educational institutions by developing and empirically testing a conceptual model that links awareness of toy reuse, the characteristics of second-hand toys, and supply in educational institutions. The empirical results show that the characteristics of second-hand toys have a stronger effect on supply than awareness, which is important for developing effective circular economy practices in educational institutions.

Keywords: circular economy, reuse, refurbishment, sustainability, toys, educational institution

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