

Hyper-Local Recirculation of Second-hand Clothing Through Donation-Thrift Networks

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Introduction

The amount of post-consumer textile waste has been increasing over the past decades (DeVoy et al., 2021), mirroring the rise in clothing consumption. In Canada, an estimated 1.1 million tonnes of textile waste are generated each year, which amounts to a per capita average of 31.2 kg per person annually (Cheminfo Services Inc., 2022). Textile waste is typically managed through municipal solid waste (MSW) systems, donations to charities, or resale through thrift stores and consignment platforms, depending on factors such as the clothing's condition, age, and style (Laitala, 2014). As clothing production and consumption continue to rise, systems like donation, thrifting, and second-hand clothing (SHC) markets locally and abroad have become mainstream solutions for managing clothing overproduction and supporting circularity within the textile sector. In the shift toward circular economy (CE) frameworks, emphasis on the 'R' principles of reducing, reusing, recycling, and recovery of materials has become increasingly critical (Kirchherr et al., 2017).

However, textile waste diversion in Canada faces a unique set of challenges due to the country's geographic and population distribution. The lack of centralized textile recycling processes in many regions, combined with the logistical difficulties of handling large volumes of clothing across a vast, sparsely populated country, results in inefficiencies in recycling and diversion. As a result, textile diversion programs heavily rely on informal, semi-private networks composed of charitable, not-for-profit, and for-profit organizations. These organizations collect, sort, and resell SHC to mitigate landfill waste. This study aims to explore and characterize the regional diversion networks of SHC thrift retailers in Canada. These networks are collectively

defined as "second-hand clothing diversion networks" (SHCDN) and function as informal recycling systems for SHC in Canada.

Research Objective

This research aims to analyze the practices, challenges, and opportunities within regional SHCDNs in Canada, particularly focusing on how local actors (e.g., thrift stores, charitable organizations, and for-profit entities) engage with CE principles to manage textile waste. The study seeks to examine the regionalized nature of SHC diversion, as well as the tensions between centralized, large-scale systems and more localized, high-volume networks. By applying the territorial circular ecosystem (TCE) framework developed by Bourdin and Torres (2024), the study aims to identify how geographic proximity and local collaboration affect the success of diversion networks, ultimately promoting more sustainable and resilient systems for textile waste management.

Methods

This study used a mixed methods approach that included qualitative semi-structured interviews, facility tours, informal conversations, document analysis, and stakeholder analysis and mapping (Aligica, 2006; Brown et al., 2016). Data collection used purposive sampling for the semi-structured interviews with key actors within the SHCDNs, including store managers, sorters, and operations staff from thrift stores across Alberta, Saskatchewan, Manitoba, and Ontario.

A total of 25 interviews were conducted, each lasting between 1 and 2 hours. In addition to interviews, facility tours were conducted to observe the sorting, recycling, and resale processes at various thrift stores. The interviews were audio recorded, transcribed,

and analyzed using NVivo software, which facilitated coding and thematic analysis to identify trends, patterns, and challenges related to SHC diversion practices (Fereday & Muir-Cochrane, 2006).

The research draws on the TCE framework, which emphasizes the interconnectedness of local economic actors, institutions, and practices that together contribute to a CE. By applying this framework, the study aims to explore how local dynamics influence the sorting, repair, repurposing, and resale of SHC in Canadian thrift stores.

Findings

Preliminary findings suggest that there is a significant tension between large-scale, centralized SHC systems and hyper-local, regionalized diversion networks. While centralized systems benefit from economies of scale and can manage large volumes of clothing efficiently, regional networks that emphasize localized collaboration appear to be more effective at recirculating SHC. Thrift stores that leverage regional networks for sorting, repurposing, and resale of SHC report higher rates of clothing recirculation, contributing to reduced waste and better utilization of donated goods.

Hyper-Local Recirculation Strategies for Regional Diversion Networks

One key practice observed among thrift stores that operate successful regional diversion networks is the laundering and minor repair of high-value goods, which enhances the resale value of SHC. Some stores also employ online and in-store auction platforms, enabling them to reach wider customer bases and sell high-value items that may not be suitable for regular sale in-store. Additionally, several stores engage in repurposing and upcycling with the help of local actors, such as small-scale artisans or repair specialists. This localized approach not only adds value to unsellable SHC but also fosters community engagement and collaboration.

Proximity & Regional Diversion Networks

The proximity of thrift stores to local communities plays a crucial role in the success of these diversion networks. By being close to their customer base, these stores are able to build stronger relationships with donors and consumers, facilitating the collection and

recirculation of SHC. Furthermore, the proximity allows for easier collaboration among local actors, including municipalities, charities, and small businesses, which supports the development of a CE at the regional level. Greater local recirculation of SHC can potentially reduce the burden of the substantial volumes of SHC exported to international markets where serious environmental harm must be assumed (Brooks, 2013).

Regional Diversion Network Challenges

However, several challenges persist in managing textile waste through regional diversion networks. A primary challenge identified is the transportation costs associated with moving unsellable SHC to textile recycling centers or processing facilities. In Canada, where such facilities are limited, particularly in rural and remote areas, the cost of transportation can be prohibitively high. Additionally, there is the ethical dilemma surrounding the export of excessive volumes of SHC to overseas markets. Some thrift organizations have developed creative solutions to address these challenges by fostering hyper-local recirculation practices. For example, smaller not-for-profit thrift stores have found ways to increase retail floor sale periods and upcycle or repurpose unsellable SHC within their communities, avoiding transportation costs and the negative impacts of overseas exports.

Conclusions

The study underscores the critical importance of geographical proximity and localized collaboration in establishing successful regional SHC diversion networks. By leveraging the strength of regional networks, thrift stores and their partners can substantially enhance resource optimization, drive waste reduction, and foster more resilient circular systems for textile waste management. However, significant challenges remain, particularly concerning transportation costs and the ethical dilemmas tied to the export of SHC.

To effectively address these challenges, the study advocates for the implementation of robust regulations and legislation that govern international textile waste flows. This approach is vital in addressing the concerning surplus of primary and secondary textiles that are often of

poor quality. Furthermore, government investment in cost-effective, low-fi technological solutions for regional recirculation is imperative to cultivate localized CE practices in Canada.

These strategic efforts would improve waste management practices and contribute to a more sustainable fashion industry. One that prioritizes circularity and resource conservation, fundamentally transforming the way we approach textile waste for the betterment of our environment and society.

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