

# Reverse supply chains of non-profit organizations for textile reuse

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## Abstract

**Purpose** – Non-profit organizations (NPOs) are exposed to a highly competitive environment in which they are forced to grow their commercial activity to acquire additional financial resources. This study aims to create an understanding of how NPOs involved in textile reuse as a revenue-generating programme manage their reverse supply chains (RSC).

**Design/methodology/approach** – The research involves an embedded single-case study of NPOs in Finland involved in post-use textile collection. The main data sources are semi-structured interviews and participant observations.

**Findings** – This study is inspired by the microfoundations movement and identifies the underlying microfoundations of the NPOs' capabilities for managing RSC for textile reuse. The study contributes to the literature by demonstrating NPOs' lower-level, granular practices and their adaptations for achieving quality outcomes in textile reuse.

**Research limitations/implications** – The findings have context sensitivity and apply to the NPOs which operate in a context similar to Finland, such as in other Nordic countries.

**Practical implications** – This study continues the discussion on the adoption of "business-like" practices in the NPOs' pursuit of additional revenue streams to finance humanitarian work. The findings of this study can also be transferred to the growing area of domestic textile circularity.

**Social implications** – Using the case of NPOs in textile reuse, the study illustrates how RSC management can serve a social, non-profit cause and transform unwanted textile products into a source of fundraising for humanitarian work.

**Originality/value** – This enriches the understanding of NPOs' practices within the scope of revenue-generating programmes by examining one of them – textile reuse through charity shops from an RSC perspective.

**Keywords** Reverse supply chains, Non-profit organizations, Post-use textile, Charity shops, Textile reuse

**Paper type** Research paper

## 1. Introduction

Non-profit organizations (NPOs) operate in a highly competitive environment (Minguez and Sese, 2022). In the past 30 years, these organizations have nearly doubled in number (Reilly, 2016), often offer overlapping societal services and compete to receive financial support from private donors (Minguez and Sese, 2022). Financial support is crucial for the NPOs' charitable work. In response to acute emergencies and long-term humanitarian projects, NPOs use donations to provide cash-based or in-kind aid for the target population in need (Castillo, 2021; Piotrowicz, 2018). To stabilize their funding situation and decrease their dependency on monetary donations, NPOs actively grow commercial activity to generate additional revenue streams (King, 2017). The most common examples of such activity are revenue-generating programmes, such as selling merchandise, organizing events or engaging in cause marketing with a for-profit organization.

The discussion around the evolving non-profit sector and becoming alike social enterprises (Maier *et al.*, 2016; Reilly, 2016) has recently been wide-ranging. However, NPOs' practices within the scope of the revenue-generating programmes remain

underexplored (King, 2017). This study contributes to this gap by examining one of the revenue-generating programmes – textile reuse through second-hand charity shops. To enrich our understanding, this study investigates how NPOs that have adopted such revenue-generating programmes manage their reverse supply chains (RSC) for textile reuse.

NPOs have a goal of attracting and sorting the highest quality pre-owned textiles for resale at charity shops (Paras *et al.*, 2018). The vintage or branded textiles in good condition drive the sales of NPOs at the charity second-hand shops and contribute to the fundraising goals of this revenue-generating programme. To meet this goal, NPOs tailor their RSC processes to meet the quality demands of charity second-hand shops. Long-term involvement in textile reuse through charity shops has made the RSCs of NPOs among the largest post-use textile networks globally (Pal, 2017). This study is driven by the interest to capture the lower-level,

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The research was supported by Liikesivistysrahasto, the Foundation for Economic Education in Finland.

Received 8 March 2023

Revised 28 July 2023

1 December 2023

Accepted 10 February 2024

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The current issue and full text archive of this journal is available on Emerald Insight at: <https://www.emerald.com/insight/2042-6747.htm>



Journal of Humanitarian Logistics and Supply Chain Management  
Emerald Publishing Limited [ISSN 2042-6747]  
[DOI 10.1108/JHLSCM-03-2023-0018]

crucial building blocks of NPOs' capabilities to manage these processes. The study's objective is to understand how different adaptations to small-scale, more granular practices may influence quality outcomes in textile reuse.

In pursuit of the study's aim and objective, the "microfoundations movement" has inspired the research on NPOs' RSC management (Felin *et al.*, 2015; Barney and Felin, 2013). All of the above has led the study to raise the following research questions:

- RQ1.* What are the NPOs' underlying microfoundations of capabilities to manage the reverse supply chains for textile reuse?
- RQ2.* Which adaptations of these microfoundations influence the quality outcomes of the NPOs' collection and sorting of post-use textiles for reuse?

Answering these questions is important for two major reasons. Besides the non-profit context of this study, the RSCs for textile reuse have spiked interest as the enablers for textile circularity. Increased fast-fashion textile consumption can be observed in the overwhelmed second-hand market where used clothing significantly dominates over other product categories (Zanjirani Farahani *et al.*, 2022). Charity shops contribute to environmental sustainability with the principle of circularity embedded in this revenue-generating programme. NPOs' charity second-hand shops decrease the consumption of new textiles and extend the lifecycle of existing textile products (Hsuan *et al.*, 2015). Some NPOs also use collected items including textiles as in-kind humanitarian aid (HA) (Piotrowicz, 2018). Despite an increased interest in this research direction, little is yet known about lower-level practices and how they help organizations build stronger capabilities and routines (Bocken and Konietzko, 2022; Hedegård *et al.*, 2020).

Secondly, charity shops serve as a platform to enable charitable giving and fundraising for a socially important cause (Guo and Xu, 2021). It includes various humanitarian development projects such as equal access to education and poverty reduction. These efforts contribute to social sustainability. They establish a practical example of how RSCs can serve a social, not-for-profit cause along with offering the environmental benefits of textile reuse. Enriching an understanding of this topic could help build truly sustainable RSCs that meet the triple bottom line of sustainability (Pagell and Shevchenko, 2014; Elkington, 1998).

The study will seek the answers to these research questions by conducting participant observations and semi-structured interviews with the case NPOs in a Nordic country. The following section will elaborate on textile reuse, RSC management and the "microfoundations" lens chosen for this study. The remaining sections will offer an overview of research methodology and study results. The final sections will present a discussion of the study findings and conclude the study.

## 2. Reverse supply chains of non-profit organizations for textile reuse

### 2.1 Textile reuse as a revenue-generating programme

Textile reuse is not a new phenomenon compared to emerging textile recycling initiatives. Textile products, especially clothing, are often passed down from an older child to a younger one in a family to prolong their use and reduce the cost of purchasing new clothing.

Reuse is a waste prevention strategy when the end-of-use products restore their original functionality without any or with a little modification (Grant *et al.*, 2015; Hsuan *et al.*, 2015). The waste hierarchy prioritizes this strategy due to its increased environmental benefits from refusing to purchase new textiles and using already created products for a longer period (Carter and Ellram, 1998; Hsuan *et al.*, 2015).

As a revenue-generating programme, textile reuse serves the purpose of fund generation and, in some cases, humanitarian clothing aid. Oxfam, Red Cross and UFF are only a few examples of such organizations worldwide. NPOs collect textile donations which are then sold at charitable outlets, commonly known as charity second-hand shops (Guo and Xu, 2021; Zanjirani Farahani *et al.*, 2022). Charity shops attract several main categories of textile consumers. Some consumers seek rare and unique products, often referred to as vintage or lower-price alternatives to new products (Paras *et al.*, 2018). A relatively new category is environmentally conscious consumers. These consumers are driven by the sustainability image of the second-hand market where they can find a more environmentally friendly consumption alternative (Geegamage *et al.*, 2023; Hvass, 2014; Sandberg *et al.*, 2018). In the fashion community, second-hand products are often referred to as "pre-loved" which reflects upon the desired consumer perception of textile reuse (Re: Love, 2023; Relove, 2023).

The potential to create economic value from unwanted products is seen by NPOs as one of the main drivers for engaging in post-use textile collection (Sandberg *et al.*, 2018). Current second-hand market value worldwide is estimated to be worth around £118.3bn (US\$119bn) and is expected to show rapid growth up to £214.2bn (US\$219bn) by the year 2026 (Statista, 2022). The economic gain from selling textile donations is largely dependent on the donation-based supply chains of NPOs. It includes the costs incurred in donation collection and sorting and NPOs' ability to mitigate the risks from a low level of control over the quality and volume of donation flows (Guo and Xu, 2021; Zanjirani Farahani *et al.*, 2022). NPOs also experience increased competition with private second-hand shops and online second-hand platforms for good-quality, reusable donations that may include vintage, branded and luxury pieces (Zanjirani Farahani *et al.*, 2022).

### 2.2 Reverse supply chains of non-profit organizations and quality in textile reuse

RSC management encompasses a wide scope of processes for managing the flow of materials and products from end users (reverse flow) to a company or an organization (Russo *et al.*, 2021; Rogers and Tibben-Lembke, 2001). These processes enable a range of activities for recapturing product value or disposal, including processing commercial returns, resale on secondary markets, remanufacturing, refurbishing and recycling (Peretti *et al.*, 2015; Rogers and Tibben-Lembke, 2001).

The scope of RSC management has become significantly broader since the early introduction of the concept (Wang *et al.*, 2017; Peretti *et al.*, 2015). In relation to the academic literature, the development of this research area was driven by the for-profit context and its impact on business performance (Blackburn *et al.*, 2004; Huscroft *et al.*, 2013; Huang *et al.*, 2016). The topics that shape the ongoing discussion, for example, include the barriers and drivers (Aminoff and Sundqvist-Andberg, 2021; Govindan and Bouzon, 2018), the

managerial complexity of the “first mile” of the circular economy (Jäämaa and Kaipia, 2022; Sandberg, 2023), operational insight into the collection and processing of post-use products and consumer recycling behaviour (Hinkka *et al.*, 2023; Flygansvær *et al.*, 2021; Halldórsson *et al.*, 2019).

The RSC management research in the non-profit context is yet starting to gain volume (Peretti *et al.*, 2015). The research contributions to this emerging discussion attempt to improve the environmental performance of humanitarian supply chains without compromising the objectives of humanitarian operations (Saari, 2023; Peretti *et al.*, 2015; Eng-Larsson and Vega, 2011). The adaptation of RSC management to the humanitarian context benefits the field, for example, in organizing the reverse flows for used vaccines and in the aftermath of disaster relief (Andiç-Mortan and Gonul Kochan, 2023; Tuomala *et al.*, 2022). This study develops the discussion on the edge of both contexts. It offers a perspective of NPOs which acquired a solid background in managing RSCs for textile reuse as their fundraising efforts for HA work.

Regardless of the contextual settings, the RSCs encompass the following key processes (Huang *et al.*, 2016): product acquisition or collection, initial processing (inspection), sorting and categorizing and disposition (for reuse and recycling). The contextual factors suggest adaptations of these key processes tied to the purpose decisions (Flygansvær *et al.*, 2021). Therefore, NPOs tailor their RSC processes to attract reusable textiles and adjust their sorting routines to discover high-quality donations (Sadriani *et al.*, 2020; Nørup *et al.*, 2019).

The notion of product quality suitable for textile reuse and second-hand resale is described vaguely. In this context, quality refers to the ability of post-use products to meet the expectations of new end users regarding products’ features after the application of the key RSC processes (Wijewickrama *et al.*, 2021). Quality assurance in textile reuse is a challenging task due to intangible and often subjective elements attached to the perception of second-hand textile products. These elements include the social and emotional value attached to the product, a perception of vintage style or wearable, “like new” condition (Turunen *et al.*, 2020; Geegamage *et al.*, 2023; Zanjirani Farahani *et al.*, 2022). For example, a textile product of a popular brand in good condition is a high-quality “diamond” in a charity second-hand shop (Paras *et al.*, 2018). The topic remains underexplored from the perspective of RSC processes, even though the collection, sorting and categorization are crucial contributors to the quality outcome (Wijewickrama *et al.*, 2021).

The current understanding of factors that positively influence the reverse flow is more tightly focused on the volume of post-use products in the collection rather than quality. The choice of collection method closer and more convenient for the donor tends to influence both the volume and quality. The convenience, proximity and service level motivate end consumers to recycle or donate their post-use products (Flygansvær *et al.*, 2021; Guo and Xu, 2021; Pal, 2017; Birtwistle and Moore, 2007). In RSCs, the end consumer is responsible for initiating the reverse product flow (Tibben-Lembke and Rogers, 2002). So, the post-use products will have many points of origin and, in the case of post-use textiles, no unified product assortment such as a model or brand. To address that, NPOs adopt a variety of close-to-donor channels

such as on-call pick-up services from home and collection containers near parking lots and supermarkets (Paras *et al.*, 2018; Zanjirani Farahani *et al.*, 2022).

Little is still known about what influences a manual, labour-intensive procedure (Sandberg *et al.*, 2018; Pal, 2017) which transforms the reverse flow of textile donations into charity shop stocks. The continuing trend of fast fashion creates additional pressure on the NPOs’ sorting routines (Zanjirani Farahani *et al.*, 2022). NPOs collect larger volumes of post-use textiles. However, the donations tend to have a shorter lifespan and to be more suitable for textile recycling than reuse (Heikkilä *et al.*, 2019; Dahlbo *et al.*, 2017). The interest in post-use textile sorting recently increased from both the academic and practitioners’ perspectives (Heikkilä *et al.*, 2019; Nørup *et al.*, 2019) explained by recent policy measures undertaken by the European union (EU) (Directive, 2018/851) and new circular business opportunities (Bocken and Konietzko, 2022).

The importance of meeting quality expectations in textile reuse goes beyond the economic interests in revenue-generating programmes. Textile exports emerge from a need to find a solution for large volumes of post-use textiles that are less suitable for reuse. However, by extending their reverse flows to developing countries, NPOs bring down the social and environmental benefits of their revenue-generating programmes. Traditionally collected in the Global North, lower-quality pieces are exported to the final destinations in the Global South, for example, to Ghana, Nigeria and Pakistan (Brooks, 2015). Independent investigations provided examples of the journeys that the exported textile donations could complete. A blouse donated to a large British NPO was found in Zambia and a hoodie donated to a Finnish NPO was traced to Nigeria (Yle, 2020; Brooks, 2015). Second-hand textile exports reinforce socio-economic difficulties and become the causes of poverty and inequality. Due to the lack of recycling opportunities in those locations, low-quality donations cannot be disposed of responsibly and often end up landfilled.

To meet future demands, NPOs will need to adapt their operational models, including their RSCs (Zanjirani Farahani *et al.*, 2022). The reverse flow of post-use textile donations will be further affected by the new legislation on separate textile collections for reuse and recycling (European Commission, 2021) and the increase in circular business models (Bocken and Konietzko, 2022). Fulfilling the lack of understanding of RSC management on the most granular lower level will offer grounds for navigating the change.

### 2.3 Structures, processes and individuals

RSC management is complex and demands equally complex capabilities within the organization (Russo *et al.*, 2021). Studying such a complex phenomenon requires breaking it into smaller, constituent parts. It will help to enhance the understanding of how the phenomenon is constructed and subsequently, how it can be managed and improved. For this reason, the study applies the microfoundations view as a lens (Barney and Felin, 2013; Felin *et al.*, 2012).

The microfoundations “movement” fulfils the critique of exploring larger concepts such as routines and capabilities with a lack of specification and empirical knowledge on micro-level practices (Santa-Maria *et al.*, 2022; Bocken and Konietzko, 2022). The study opens the “black box” mentioned by Felin *et al.* (2015) that remains for exploration across a variety of

disciplines. Particularly in this study, the microfoundations bring into focus micro-level categories that build up the NPOs' capabilities to manage their RSCs for textile reuse.

Attention to micro-level elements is theoretically relevant as an approach to the scientific reduction that contributes to explaining a collective phenomenon (Felin *et al.*, 2015). From the practical perspective, the microfoundations view can help NPOs review what builds their routines and capabilities, challenge the existing organizational settings and open pathways to innovation in the highly competitive second-hand market (Bocken and Konietzko, 2022). Applying such an umbrella concept from organizational and management studies can also catalyse new perspectives on textile reuse and recycling and advance textile circularity strategies (Bocken *et al.*, 2017). The limitations and critique of this approach in looking at the phenomenon are related to an overly exclusive focus on the micro-level elements and missing out on the macro-level influences and causal relations (Barney and Felin, 2013). However, in this study, such focus is seen as beneficial for achieving the study's aim of understanding solely the building blocks of NPOs' capabilities at the lower level of RSC management.

This study seeks elaboration on the existing key RSC processes using a pre-existing conceptual idea of microfoundations. It will specify these constructs and assess them empirically in the studied context of textile reuse and NPOs (Fisher and Aguinis, 2017). In supply chain management, "context sensitivity" and "sensitivity to practice" are seen as important components for the theorizing and development of the discipline (Halldórsson *et al.*, 2015). Felin *et al.* (2015) also emphasized that it is difficult to separate the origins of routines and capabilities from their contextual factors.

The microfoundations are organized into three main categories: structures, processes and individuals (Felin *et al.*, 2015). Table 1 and the remainder of this chapter provide an overview of RSC attributes and examples of those in the NPOs' context.

The microfoundations related to *structures* establish the context within an organization and enable individual or collective actions for information processing, integration and coordination (Felin *et al.*, 2015). The NPOs' revenue-generating programme starts with the design of the collection channels and decisions on the logistics structure for further

processing of collected donations. *Processes* describe the sequences of interdependent events which form and link key RSC processes and lead to the development of capabilities to manage the RSCs (Felin *et al.*, 2015). NPOs adopt a variety of processes, including collection, sorting and grading, and then, arranging the distribution of post-use textiles to charity second-hand shops.

*Individuals* are highly important but are rarely addressed in the RSC management literature. In contrast, the microfoundations movement has been criticized for its strong focus on individuals and interactions (Barney and Felin, 2013). The focus on NPOs and textile reuse balances this critique because the individuals are essential to sorting-related processes. For instance, the sorting line workers are the ones who make a highly important albeit subjective decision on the reuse potential of each textile donation. NPOs constantly educate their sorting line workers to recognize current fashion trends and second-hand "diamonds" (Sandberg *et al.*, 2018; Beh *et al.*, 2015). Large volumes of donations and competition in the second-hand market also force NPOs to employ a professional workforce rather than volunteers. It impacts the NPOs' social mission of employing people who find it difficult to get a workplace elsewhere or who are willing to contribute to humanitarian work (Zanjirani Farahani *et al.*, 2022).

### 3. Research methodology

This chapter provides information on case selection, data collection and analysis. This study is focused on the largest NPOs in Finland involved in textile reuse as the revenue-generating programme. The data collection process has been two-fold. It involves semi-structured interviews with practitioners as well as participant observations of the charity shops and sorting lines of the case NPOs. This chapter explains the focus on Finland as the case country and provides details on data sources and their analysis.

#### 3.1 Case selection

NPOs in textile reuse are a phenomenon that is predominantly present in the Global North (Brooks, 2013; Sandoval Hernández, 2019). For example, in the UK, the Salvation Army and Oxfam are the largest post-use textile collectors with many charity shops in the country (Brooks, 2013). The charity

**Table 1** Examples of reverse supply chain attributes in the NPO context

Categories of microfoundations	Examples of reverse supply chain attributes	Examples from the NPO context
<b>Structures</b>	Many points of origin A centralized or decentralized structure The reverse flow initiated by the end consumer	Likely to combine centralized and decentralized structures Variety of collection methods adopted (direct handover, pick-up service, collection container)
<b>Processes</b>	Typical processes include collection, sorting and grading and reverse distribution Collection and sorting of ununified product assortment A lack of visibility and forecasting difficulties	Organizing convenient, close-to-donor collection Manual sorting Identifying vintage, fashionable and branded items Classifying by gender, use and quality level Ironing and repairing Keeping inventory
<b>Individuals</b>	Skills needed to perform sorting of post-use products	Employing volunteers to increase societal impact and reduce labour costs Special skills in finding vintage clothing

Source: Developed by the author based on Tibben-Lembke and Rogers (2002)

second-hand shops of another international organization, the Red Cross, are spread across a variety of geographical locations. For example, the Red Cross charity shops can be found across all Nordic countries including Finland, Sweden, Denmark and Iceland (Punainen Risti Kontti, 2023; Svenska Röda Korset, 2023; Røde Kors Hovedstaden, 2023).

While the NPOs and charity shops studies were conducted with strong attention to the UK market, still little is known about the contextual differences and applicability of findings in the Nordic region (Dahlbo *et al.*, 2021). The Nordic countries share a similar context where the post-use textile collection is mostly handled by NPOs with a common trend of rising textile exports. Studies estimate that the Nordic NPOs increased this activity by 25% in recent years (Nørup *et al.*, 2018). Looking into what builds NPOs' routines and capabilities would be necessary to challenge the existing organizational settings (Bocken and Konietzko, 2022), and open pathways to increase domestic textile circulation.

In the Nordics and across the EU, Finland stands out as a pioneer in textile circularity. Among the Nordic countries, Finland demonstrates the highest domestic reuse rate (Paras and Pal, 2018). The country contributes to the field with the adoption of new, innovative processes and technologies for textile reuse and recycling (Spinnova, 2023; Rester, 2023). Finland has also obtained a comprehensive overview of the textile flows in the country (Dahlbo *et al.*, 2021) but the features of the RSCs for these flows need to be better understood (Jäämaa and Kaipia, 2022). For these reasons, Finland has been selected as the geographical context of this study.

The study adopts an embedded single-case study design (Yin, 2009). NPOs in Finland are considered as a single case where each studied NPO is treated as an embedded case sub-unit. Such an approach allows for looking into multiple possible units of one single case and understanding the context of NPOs in Finland in-depth (Yin, 2009). Relying on the case study research best practices (Piekkari *et al.*, 2010), the study executes a purposeful sampling strategy (Patton, 2015). Firstly, the case selection has been limited to large non-profit charity organizations in the country which generate funds to finance global humanitarian work. The study excludes second-hand companies operating for profit, municipal recycling centres and public waste management companies. Then, the study has been seeking representative cases which can show the variety of elements of the studied phenomenon (Silverman, 2010; Patton, 2015).

Table 2 above provides more detailed information on the case NPOs. All case organizations are working with voluntary textile donations that originate from the end consumers. The embedded cases include NPOs with centralized and decentralized logistics structures. NPOs adopt different collection methods, for example, in-store and container-based. Only a small portion, up to 5%–10% of all collected post-use textiles, is donated by private and public companies or associations. The initial differences are the collection volumes, collection methods and the existence of humanitarian clothing aid and textile export. The collection volumes remained almost on the same level for the years 2018 and 2019 per each organization, respectively. The pandemic has been special for the case NPOs as for all other NPOs (Zanjirani Farahani *et al.*, 2022). For this reason, the year 2019 has been selected as the base year in this study.

### 3.2 Data collection: participant observations and semi-structured interviews

In this study, the observations and interviews capture a variety of practices available across the studied case organizations. Participant observations helped to provide an accurate description of the physical environment and targeted the collection process and sorting facility of each organization in this study (Saunders *et al.*, 2009). As Patton argues (2015), observations of the physical environment are an essential element for understanding the true meaning of people's activities. The role of the researcher is identified as participant-as-observer (Saunders *et al.*, 2009). This is because an entry to the premises of the case NPOs is subject to official permission from the management team which requires revealing the true purpose of the visit. While observing, the researcher took field notes and pictures if allowed, which have later been used in data coding and analysis.

The interviews allowed the collection of data rich in a context that is not visible to an observer's eyes (Patton, 2015). The interview format consists of semi-structured face-to-face interviews and online interviews that employ the use of the interview guide to ensure the relevance of the data collected (Saunders *et al.*, 2009). The first interview round took place face-to-face and the follow-up interview round with the same organizations and participants was conducted online. The experts reflected on the RSCs of their organization and provided explanations to the questions from the observations in the interviews. Table 3 below provides details on the interviews and observations in this study as well as secondary, supportive data sources.

Based on the trustworthiness model of Wallendorf and Belk (1989), credibility in this study has been ensured through follow-up conversations with the interviewees and data triangulation. Gathering information from different data sources, as explained previously in the tables, has resulted in the points of data overlapping, securing reliability and dependability. As for confirmability, this study is transparent and supported by the evidence of interview transcripts, pictures and copies of the documents provided by the case NPOs.

### 3.3 Data analysis

The data analysis started with creating an overview and getting to know the collected data. The interviews were transcribed. Together with the field notes from the observations, the interview transcripts were imported into the NVivo coding software. This software allows one to have a well-organized coding process. The beginning of the coding process was highly explorative. The initial goal was to organize the data and make the first links between the emerging first-order codes. The analysis process later continued by moving away from descriptive coding towards combining it with existing literature (Saldaña, 2016; Yin, 2009). In addition, this process triggered the search for additional academic and non-academic literature to explain the observations. Table 4 below provides an overview of the data structure and the analytical process.

With the help of the Miro software, the coding results were transferred into a mind map. The mind map evolved significantly at least three times when the researcher reflected upon the proposed categorization logic. At the later stages of the analysis process, the mind map helped to observe how categories and their dimensions influence one another. A full

Table 2 General information about the case organizations

Description	Details	Organizations		
		A	B	C
<b>Purpose of the operations</b>	Second-hand shops	Textile only	Range not restricted	Range not restricted
	Humanitarian clothing aid	Very few direct donations	No direct donations	Spare unit for humanitarian aid
<b>Charity shop location preferences</b>	General logic	In the city centre and high-demand areas	In the city centre and high-demand areas	Outside the city centre, close to the big shopping areas
	Geographically	Multiple shops in the capital area, South-Western Finland and excluding Northern Finland	Several shops in the capital area and South-Eastern Finland, excluding Northern Finland	One shop per town in the largest towns in Finland including Northern Finland, one unit = one shop with sorting line
<b>Collection methods and amount of textile collected</b>	Collection method	Container	Containers, direct	Direct, few containers
	Number of containers	≈3,300 containers in Finland, ≈280 containers per municipality	≈120 containers in Finland, mostly in the central area	supported by 2–3 containers per unit
<b>Sorting facilities</b>	Collection volumes	14.6 million kg	≈1.3 million kg	≈1.5 million kg
		Two facilities, centralized for shops in the central region	One facility, centralized for shops in the central region	Decentralized, each unit has its own sorting facility

Source: Developed by the author

Table 3 Interview and observations in this study

Organization	Documents	Interviewee	Location, total duration	
<b>Interviews</b>				
A	Annual report, information brochures for the loyal customers of the charity shops, results from the customer surveys conducted among the loyal customers, website	Communication manager Logistics manager	Central sorting facility for central Finland (~4h) Same (~2h)	
B	Website, information posters and brochures	Charity shop department manager Logistics manager	Central sorting facility for the Helsinki area (~2h) Same (~2h)	
C	Officially issued instructions and guidelines for sorting and packaging, accounting and reporting sheets for humanitarian aid, information brochures, posters and decorated stands	Clothing aid program officer Director of the charity shop chain	Logistics centre for humanitarian aid (~3h) A charity shop unit in Vantaa, the capital area (~2h)	
<b>The summary of observations</b>				
<b>In relation to the phase of</b>	Observations	Organizations	Time	Outcomes
<b>Collection</b>	Pick up of donations from the collection containers on the route in Helsinki, starting and ending at the centralized sorting facility	A	~ 3h	Pictures Notes about the process and conversation with the employee on duty
<b>Sorting and grading</b>	Donation area at the charity shop	C, B	~ 1h	Pictures and notes
	Sorting for the charity second-hand shops performed by the NPOs workers in the sorting facility	A, B, C	~1.5h each	Pictures not allowed Notes about the process and conversation with the employee on duty
	Sorting and packaging process for humanitarian clothing aid	C	~ 1.5h	Pictures, notes about the process and conversation with the employee on duty
	Sorting for the vintage selection of the second-hand charity shops by the worker specialized in vintage fashion	A	~ 20min	Pictures not allowed Notes about the process and conversation with the employee on duty

Source: Developed by the author

Table 4 Data structure: examples of quotes and categorization

First-order codes (examples of quotes)	Second-order codes	Themes	Aggregated dimensions	Categories
"We decided to reduce the number of containers we have [...] our primary purpose is to get enough for our stores [...] and we get so many [via the containers] that our sorting facility cannot fit anymore" - B	Impact of container-based collection method on donation volume	Container	Collection method	Structures
"The stores receive mostly women trousers and shorter skirts that are common in the [Western] culture. Some of our destinations for humanitarian aid strictly require long skirts for women. With respect to their traditions, when [our] stores sort received donations, they specifically look for requested items to the clothing aid unit" - C	Special sorting criteria for humanitarian clothing aid	Redistributing as humanitarian clothing aid	Deciding upon a category as a result of sorting	Processes
"Through the years of experience, our workers have learnt what will be resold at the store and what will not" - B	"Knowing what will be sold" based on applied experience in sorting post-use textiles	"Knowing what will be sold"	Applied experience	Individuals

Source: Developed by the author

range of aggregated dimensions and themes is presented in the following chapter including the empirical evidence from the data and interview quotes.

## 4. Results

All case NPOs execute their revenue-generating programmes which involve RSC management for textile reuse. The proceeding chapter first identifies the underlying microfoundations of the NPOs' capabilities to manage their RSCs. The identified microfoundations are presented in three categories: structures, processes and individuals (Felin *et al.*, 2012).

### 4.1 Structures, processes and individuals

Firstly, this study observed three aggregated dimensions of the microfoundations of capabilities that represent *structures*. The aggregated dimensions consist of multiple themes, which are supported by the empirical evidence from the data (Table 5).

This study highlighted different logistics structures and textile collection methods among the case NPOs. A centralized logistics structure is necessary to support a wide container network for larger volumes of post-use textiles. In the context of Finland, the sorting facilities of the case NPOs, which rely on the container-base collection, are located in the capital area where the most collection volume and second-hand demand originate. On the contrary, a decentralized logistics structure was observed within the NPOs, which rely on direct donations to charity shops. A decentralized structure with a sorting line at each charity shop was also common for NPOs with collection container locations outside Southern Finland. The case NPOs, which rely on the direct collection method show a higher level of interaction with donors in the collection process. The donors interact with the NPOs' staff members, visual elements such as banners and leaflets about the NPOs' humanitarian work, as well as the typical assortment of charity second-hand shops.

Secondly, this study observed diverse *processes* such as collection, pre-sorting, sorting, forecasting and organizing

Table 5 Structures

Aggregated dimensions	Themes	Empirical evidence
Logistics structure	Centralized	NPO A and B use one or two large facilities where all collected donations are sorted and from where they are distributed to the charity shops; NPO C has adopted this structure for humanitarian clothing aid
	Decentralized	NPO C has its own collection point and sorting line at each charity shop; this logistics structure is common for the charity shops of NPO A and B in locations away from central Finland
Collection method	Direct	NPO C and B have a specific donation zone at the second-hand charity shop where donors can leave their donations when visiting the store
	Pick-up from home	When donors give away furniture or electronics as donations to NPO B, NPO workers might also ask for clothes and home textiles; a traditional home pick-up service for textile donations is not widely offered among the case NPOs
	Container	All case NPOs have their own metal donation container with a logo and/or a short description of the desired donations; NPO A and B locate containers at the parking lots, nearby shopping centres and corner grocery shops; NPO C's containers support each charity shop
Interaction (with)	NPOs' staff	The staff of NPO C greeted the donors and took donations from them at the shop
	Visual elements	The direct donation area of NPO C and the charity shop of NPO B are decorated with banners and pictures which explain the mission and outcomes of the NPOs' humanitarian work
	Typical assortment	The donors of NPO C continue their visit at the charity shop to check sold items after handing in their donations for NPO C

Source: Developed by the author

feedback loops in the supply chains of NPOs. Six aggregated dimensions and the themes within them introduce the NPOs' processes as microfoundations of capabilities (Table 6).

The internal processes of NPOs are tailored to discovering high-quality items among all donations. This study highlighted unique processes such as prioritizing sorting by the location of the container, identifying style, assessing if the clothing looked "worn-out" when inspecting the condition of the donations or receiving feedback from the charity shop on "what gets sold". The NPOs prepare for peaks in donation inflow based on annual events (e.g. spring cleaning) when donors tend to donate more, although most likely off-season items. A limited warehouse capacity allows for only keeping stock of some high-quality off-season donations. The remaining donations become part of the NPOs' processes for humanitarian clothing aid, textile export or managing them as energy waste.

Thirdly, this study identified the microfoundations of capabilities that represent *individuals* (Table 6) working at the sorting line. The findings particularly refer to the sorting process as the point where the individuals (sorting line workers) discover "second-hand treasures". The sorting process relies nearly completely on manual work where the only observed automation was a sorting belt and a trolley-lifting system. The data shows the high relevance of applied experience. Relevant fashion or textile-related education is also seen as a strong advantage.

#### 4.2 How microfoundations interact

This study highlighted that the case NPOs differ in yearly collection volumes and distribution outcomes of sorted donations, as shown in Table 7 below. Thus, the remainder of this chapter explains how identified microfoundations of capabilities and their dimensions interact, and how this influences the quality outcomes.

All case NPOs collect post-use textile donations primarily for resale at charity second-hand shops (Paras *et al.*, 2018). The organizations pursue the goal of collecting good-quality textiles that can be sold to new end customers.

[...] Donate the kind of clothing you would give to your friend [...] I think that's a really good rule of thumb – A.

Understanding the notion of post-use textile *quality* which is strongly present in the NPOs' collection and sorting processes is important to the overall success of the revenue-generating programme. The interviewees refer to *quality* as "reuse potential" or "likelihood of being sold" when the items are displayed at the second-hand charity shop. Post-use textiles with the highest reuse potential drive sales in charity shops and are also suitable for humanitarian clothing aid. Special attention is given to textiles that belong to vintage or luxury segments, and basic items in good condition as these categories of post-use textiles generate the highest revenues for the NPOs [Processes: sorting, deciding upon a category].

Items with a lower likelihood of being sold in the country of collection or good-quality off-season pieces that no longer find space in stock are sold in bulk domestically or exported abroad (Nørup *et al.*, 2019). These activities also generate revenue for NPOs. However, while the price of one vintage item at the charity shop could easily go above 30–50 euros, one sack of textiles for export could be worth only a couple of euros per kg.

We are able to resell to other countries in Europe [...] so that's actually something we are able to support [our organization] with the funds we get from that – B.

As a result, the following proposition has been formulated:

*P1. To achieve the goal of the revenue-generating program, NPOs should adopt sorting processes tailored to discover donations with higher reuse potential, such as vintage, luxury segment, and popular brands.*

When it comes to regulating the quality of the reverse flow of textile donations, the data suggests that the collection method and donation context have a major influence. Convenience has been identified as one of the most influential factors in the decision to donate (Guo and Xu, 2021; Horne, 1998). Despite the lack of convenience, the direct collection method tends to bring the best quality inflow because the donors make a personal effort [Structures: collection method] and experience interaction with an NPO [Structures: interaction]. As data shows, the direct collection increases the donors' awareness of the NPOs' humanitarian work. The observations at the charity second-hand shops confirm this. The donation areas are always decorated with visual materials that explain how charity shops contribute to the NPOs' humanitarian work.

When donors bring their donations to the charity store, they become more committed to the idea of reusing products as well as to our development and humanitarian work – C.

A new influential element identified in this study is interaction. Interaction occurs between the donor and the NPOs' staff members, as well as with visual elements (such as banners and leaflets) and typical product assortment at the second-hand shop. The interviewees also believe that the direct collection method is likely to convert donors into charity shop customers due to the increased level of interaction.

It may be [higher quality] because people who go to the stores [to donate] are also our [organization C's] customers. They see what kind of quality is in the store. They know what [what kind of products and in which condition] we are looking for and they want to support what we are doing – C.

As a result, the following proposition has been formulated:

*P2. A donation context with personal interaction between donors and NPOs (e.g., through direct collection) is likely to positively impact the quality of textile donations by increasing the donors' awareness and commitment to the charitable cause.*

This study observed the impact of the container collection method on collection volumes and distribution outcomes. On one hand, it is indeed a convenient collection method (Guo and Xu, 2021; Flygansvør *et al.*, 2021) that brings larger volumes of textiles [Structures: collection method]. It is often located near potential donors – at shopping malls, parking lots and gas stations and local corner shops. The case NPO A mentioned, in favour of the method, that it is unethical to go through the donations in front of the donor, which is what might happen when they are donated in person at the charity shop. This has not been evidenced during the observations at the charity shops.

What we noticed, people are generally lazy even if they care about recycling and the charitable cause of our store. An act of donating must be as convenient as possible for the donors... – A.

On the other hand, the data shows that containers might often be mistreated by individuals as a collection point for recycling rather than for reuse. Large volumes of low-quality textiles, also items that are irrelevant to the collection and trash may appear in the containers.

Table 6 Processes and individuals

Aggregated dimensions	Themes	Empirical evidence
<b>Processes</b>		
<b>Collection</b>	Collecting donations by method	NPO A and B - emptying their containers; NPO C - emptying a donation zone at the charity shop; also, NPO B - asking for used good-quality clothing when picking up other donations from a donor's home
<b>Pre-sorting</b>	Prioritizing sorting by the container location Preliminary quality inspection	NPO A - detecting which geographical areas have a higher likelihood to bring better quality donations and prioritizing these donations for further processing NPO A and B - removing dirty and/or mouldy donations, waste and items which are irrelevant to the collection before the initial sorting process begins
<b>Sorting</b>	Inspecting the condition Grouping by function Identifying style Repairing clothing	All NPOs - looking into the overall cleanliness of each item, checking for faulty functional elements (zippers, buttons) and missing decorations and assessing the look for "being worn-out" All NPOs - grouping donations by their functionality (skirts, jackets, kitchen textiles), gender (men, women) and age (adult, kids) All NPOs - identifying the most valuable items that belong to vintage or high fashion styles, luxury segment or popular brand NPO C - conducting small repairing works for good quality clothing suitable for wearing again or sewing new items from non-reusable ones (e.g. baby items)
<b>Deciding upon a category as a result of sorting</b>	Redistributing to own second-hand shops Redistributing as humanitarian clothing aid Keeping stock Exporting textiles Managing non-reusable textiles	All NPOs - grouping the donations into the supply for second-hand charity shops which contain items with the highest probability of being sold at the shop NPO C - picking donations from the good quality category which satisfy the requirements of the humanitarian aid program All NPOs - reserving good quality but off-season products as stock; NPO C always keeps a stock of clothing for humanitarian aid of all seasons and categories (gender, function) NPOs A and B - separating remaining off-season and donations with lower probability of being sold for domestic wholesale or export abroad NPO C - making use of non-reusable items as workshop supplies, raw material for new products (downcycling for insulation); All NPOs - sending non-reusable items to a waste management facility for incineration (energy waste)
<b>Forecasting</b>	Route planning based on historical data Analysing donor behaviour	NPO A and B - collecting and analysing historical records on collection volumes to understand and predict fluctuations All NPOs - following up and preparing for annual events which are linked to habits or occasions (e.g. spring cleaning and a tendency to donate off-season)
<b>Organizing feedback loops</b>	Receiving feedback from the second-hand charity shops Receiving feedback from humanitarian aid recipients	NPO A - receiving feedback on sorting results from the second-hand shops and discussing it with sorting line workers; also, NPO A - charity shops can order more from categories and quality (e.g. women's dresses of quality category A) NPO C - receiving digital evidence of the aid distribution from the receiving humanitarian organization and feedback on seasonality, condition and style of clothing aid
<b>Individuals</b>		
<b>Employment status</b>	Volunteer labour Governmental employment programmes Contract employees	NPO C and B - workers join on a voluntary basis and assist or fully perform sorting and/or tasks at the second-hand charity shop NPO C - workers join under the programme for long-term unemployed citizens or immigrants learning the language and gaining their first work experience in Finland; often lasting about six months to 1-2 years All NPOs - full or part-time employees join under employment regulations (contract)
<b>Applied experience</b>	Sense of fashion trends "Having an eye" for vintage looks "Knowing what will be sold"	All NPOs - workers' ability to identify items that might have higher reuse potential due to being trendy; usually described as a sense or personal taste rather than a skill All NPOs - an ability to identify items that have higher reuse potential because a style from the past has returned and is in trend or the item belongs to an old or rare collection All NPOs - an ability to pick items from all donations that will have a higher likelihood of being sold at the second-hand charity shop, which may or may not include vintage or fashionable pieces
<b>Education and learning</b>	College degree or other relevant education Internal workshops	NPO A and B - employing workers with relevant education such as sewing or fashion for the tasks at the sorting line and at the second-hand charity shop NPO A and B - running internal practical workshops with an emphasis on current fashion trends and sharing knowledge on sorting techniques

Source: Developed by the author

Table 7 Overview of the collection and distribution outcomes of the case NPOs

Outcomes	Description	Organizations		
		A	B	C
Collection of textile donations	Incoming flow volume (textiles, shoes and accessories)	14.6 million kg	~1.3 million kg	~1.5 million kg
Distribution outcomes after sorting	Second-hand shops	3.4%	~20%	~40%
	Export	86%	~73%	No
	Humanitarian aid	2.4%	No	30%
	Energy waste	4.2%	~7%	~30%
	Material recycling	4%	No data	No data

**Notes:** The measurement accuracy has been impacted by the presence of decentralized direct collection and the practice of making rough weight estimates by one loaded trolley of donations

**Source:** Developed by the author

People often consider collection boxes as a container for textile waste as [alike to] bio and mixed-waste containers at our households – C.

We decided to reduce the number of containers we have [...] our primary purpose is to get enough for our stores [...] and we get so many [via the containers] that our sorting facility cannot fit anymore – B.

During the observations on emptying the collection containers, this study evidenced broken electrical appliances, messy clothing given away without a protective bag, broken kids' toys and a single shoe. The data shows that the containers are prone to humidity issues and if one dirty item is placed inside it can ruin all the other donations.

As a result, the following proposition has been formulated:

*P3. A container-based collection method is likely to generate a larger volume of textiles due to the increased convenience of the donation process, and proximity to potential donors, but may have negative implications on the quality of donations.*

This study highlighted a lack of technology to advance and increase the efficiency of the sorting processes. No microfoundations related to the use of technology have been identified in this study. Due to the high dependency on manual labour in sorting the donations, the microfoundations of capabilities that refer to individuals significantly impact distribution outcomes. Working at the sorting line demands personal qualities like sensing fashion trends and “having an eye” for vintage looks [Individuals: applied experience] as previously mentioned by Sandberg *et al.* (2018) and Paras *et al.* (2018). The case NPO A and B emphasized that employing a professional, full-time workforce is necessary to sustain a competitive advantage in the competition with private for-profit second-hand businesses [Individuals: employment status, education]. NPOs A and B shared that it takes time and practice to learn the sorting techniques and develop a so-called sense of “knowing what will be sold”.

Through the years of experience, our workers have learnt what will be resold at the store and what will not – B.

On one hand, inviting volunteers and employing workers under the governmental unemployment programmes increases the societal implications of the revenue-generating programme, as data and previous studies show (Zanjirani Farahani *et al.*, 2022). However, learning and experience are lost when those, whose temporary employment or volunteering term has ended, have left. This negatively impacts the sorting speed and quality of sorting outcomes, as all case NPOs admit.

As a result, the following propositions have been formulated:

*P4. Long-term employment relationships allow NPOs to develop and grow workers' skills and sense of “what will be sold” at the second-hand charity shop, which is likely to have a positive impact on distribution outcomes.*

*P5. Volunteer labour and workers from governmental unemployment programs create additional social value for the NPOs' revenue-generating program, even though this might create a risk of losing the obtained knowledge and skills needed to complete sorting routines.*

Despite the adopted variety of sorting techniques and quality assessment procedures, all collected donations rarely reach charity second-hand shops. The case NPOs differ in their distribution outcomes for the charity shops from 3% to 40% from all collected donations. The NPOs with adopted centralized logistics structures and container collection methods show higher volumes of donations that do not qualify for the domestic second-hand market (see Table 7 above). The NPOs explain this with a small share of the second-hand market for post-use textiles, and a high demand of domestic second-hand customers for the quality of products. It means that NPOs also need to establish processes for managing, in some cases, up to 90% of donated post-use textiles that cannot be sold in the country of collection. It may lead to additional complexity for NPOs in managing textile stocks and export activities (Nørup *et al.*, 2019).

The NPO C was the only NPO adopting unique processes for humanitarian clothing aid. These processes do not generate funds for the revenue-generating programme nor cash-based assistance in case of emergencies and long-term crises (Piotrowicz, 2018). Instead, NPO C keeps sorted donations of good quality in stock to ensure timely response to in-kind aid requests. Some recent and long-term in-kind aid programmes include recipients in Ukraine, Afghanistan, Mongolia and Kazakhstan.

This study highlighted microfoundations of capabilities that influence the distribution outcomes for humanitarian clothing aid. Donations are processed in a centralized logistics centre [Structures: logistics structure] for HA (NPO C, for instance, has adopted a decentralized logistics structure and primarily direct collection). After pre-sorting, donations arrive at the charity shops or from direct donations to the HA centre. The sorting line workers are employed under governmental unemployment programmes to increase societal implications [Individuals: employment status]. The process of sorting for humanitarian clothing aid is completed under special requirements [Processes: sorting]. The sorting line workers pay attention to clothing material (e.g. no fur products because of

possible bug contamination), sensitive content (e.g. military signs and political slogans) and items that may violate local traditions of the aid recipients (e.g. short skirts for women).

The stores receive mostly women trousers and shorter skirts that are common in the [Western] culture. Some of our destinations for humanitarian aid strictly require long skirts for women. With respect to their traditions, when [our] stores sort received donations, they specifically look for requested items to the clothing aid unit – C.

Along with feedback on seasonality and condition, NPO C additionally obtains feedback on the style of donated clothes [Processes: feedback]. Except for the HA centre under NPO C, the repair activities for post-use textiles are not widely observed within the case of NPOs [Processes: repair]. In other cases, NPOs A and B explain this by being value-added tax (VAT)-free in their charity second-hand operations as NPOs.

Being VAT-free does not allow us to add new value to the donated products. It means we cannot change the condition of the product towards a better one even if we have the resource and knowledge for that. In easy words, if the shirt has a loose button, we can sew it; however, if the shirt is missing a button, we cannot attach a new one – A.

As a result, the following proposition has been formulated:

*P6. To establish a humanitarian clothing aid category NPOs should adopt different structures, and processes, and manage individuals differently to address the specific prerequisites of the category, such as unique sorting requirements.*

The study links these categories of microfoundations and their aggregated dimensions with the propositions as shown in Figure 1 below.

The figure proposes a visualization of how the microfoundations interact within the same or across different categories such as structures, processes and individuals. This visualization reflects the microfoundations of NPOs' capabilities for managing RSCs that most support the quality outcomes for textile reuse.

## 5. Discussion

### 5.1 Theoretical implications

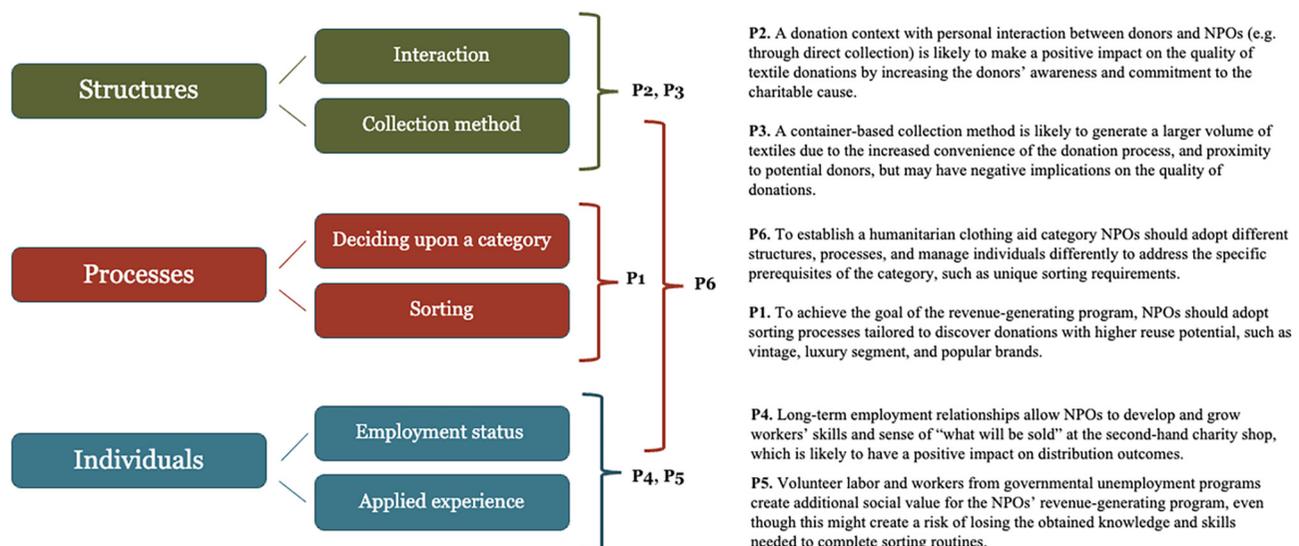
The study joins the discussion on NPOs' commercial activity and enriches the understanding of NPOs' practices within the

scope of revenue-generating programmes (King, 2017) by examining one of them – textile reuse through charity second-hand shops. The backbone of this programme is RSC management. It encompasses a wide scope of processes for managing the reverse flow of textile donations, as this study demonstrated (Russo *et al.*, 2021; Rogers and Tibben-Lembke, 2001). Using the case of NPOs in textile reuse, the study illustrates how RSC management can serve a social, non-profit cause (Peretti *et al.*, 2015) and transform unwanted textile products into a source of fundraising for humanitarian work.

The study contributes to the literature by demonstrating NPOs' lower-level, granular practices and their adaptations for achieving quality outcomes in textile reuse. By adopting the “microfoundations” lens, the practices have been identified and analysed as microfoundations of capabilities, and then, formulated as propositions. In this study, the notion of quality has been also vaguely described and referred to as a “higher potential for reuse” or a “likelihood of being sold at second-hand shops”. The insights from the literature and this study confirm that quality encompasses the subjective perceptions of style or emotional connection, condition and attribution to a famous brand or luxury segment (Paras *et al.*, 2018; Turunen *et al.*, 2020).

Firstly, the study has found that a personal handover of donations positively impacts the quality of donated textiles. An additional insight from this study has linked the collection method with the level of interaction and the overall donation purpose. During the collection process, NPOs can influence donors' awareness and increase their commitment to the organization's humanitarian mission. For example, a donation point at the charity shop offers donors a meaningful interaction with NPOs' staff or volunteers and exposes them to visual communication materials (stands, pictures, reports). At the same time, donors learn more about the quality expectations of NPOs for textile donations as they are likely to visit the charitable outlet during the donation process. These learnings confirm the importance of service level (Flygansvør *et al.*, 2021) but challenge the impact of convenience and proximity on the quality in the given context

**Figure 1** Prioritizing the microfoundations of capabilities and linking them to propositions



Source: Developed by the author

(Guo and Xu, 2021). For example, the collection containers of NPOs have been associated with significantly larger volumes of reverse flows. However, by adopting this convenient and close-to-donor method, NPOs experience much lower-quality textiles than what end users bring to the donation points at the charity shops.

Secondly, thanks to the “microfoundations lens”, the study enriches the understanding of the key RSC processes from the perspective of individuals in RSCs. The results demonstrate that long-term employment relationships nurture the sense of quality among the employees of sorting lines and charity shops. Inviting volunteers and individuals with a long-term unemployment history has always been a part of NPOs’ societal contribution (Zanjirani Farahani *et al.*, 2022; Guo and Xu, 2021). However, individuals working in textile sorting for a longer period develop an “eye” for vintage and fashion looks. Letting them go significantly influences the quality outcomes of the sorting process tailored to discover “what gets sold” at the charity shops. Additional microfoundations such as feedback loops from charity shops on sold items, internal workshops and fashion education are also present among the study findings and have been mentioned in the literature (Sandberg *et al.*, 2018; Beh *et al.*, 2015).

### 5.2 Managerial implications

Logistics managers of NPOs (and in NPOs’ context, often the fundraising campaign managers) need to consider this knowledge when adopting innovative approaches to managing the RSCs for textile reuse. Some approaches are potentially risky because they exclude from the “equation” the influential adaptations important for textile reuse. For example, active collaboration with fast fashion firms (Zanjirani Farahani *et al.*, 2022) will likely increase the volume of donations. However, the nature of this collaboration will call for adopting centralized logistics structures and will interrupt the interaction between the textile donor and the charity. In addition, fast fashion firms will likely lack the in-house processes and individuals to evaluate the quality of donations. So, NPOs will experience additional pressure on their sorting routines.

Outside of the non-profit sector, the managers of textile recycling firms can gain an in-depth understating of NPOs’ reverse flows to increase collaboration with NPOs in the future. The practices of NPOs within the scope of these revenue-generating programmes are underexplored (King, 2017; Hedegård *et al.*, 2020) which may create difficulties in establishing partnerships with for-profit companies for textile circularity. The study demonstrates that NPOs can be seen as a potential “supplier” of textiles for recycling. NPOs remove dirty or irrelevant items from the reverse flow as well as the reusable textiles. Organizing these processes is a significant effort that recycling firms need to accomplish to transform post-use textiles into new products, materials or fibres (LSJH, 2023).

The findings from this study can be transferred to the growing area of the circular economy (Bocken and Konietzko, 2022) and applied to answer the call of the EU Directive (2018/851) on waste. The EU regulation obliges the EU member states to establish national collection systems for post-use textiles and ensure their reuse and recycling according to the waste hierarchy (Hsuan *et al.*, 2015). Completing this task requires specific knowledge of collection and sorting, which NPOs have accumulated over years of experience (Pal, 2017). Unfortunately, these recyclable textiles are currently exported

abroad from the country of collection. Despite the ethical and environmental consequences of textile export being already known for a long time (Brooks, 2013), export activities continue to grow (Nørup *et al.*, 2018).

### 5.3 Limitations and future research directions

The study has strong context sensitivity. It is seen as beneficial for the nature of this study which has been seeking elaboration on the existing RSC processes in the context of NPOs using the “microfoundations” lens (Halldórsson *et al.*, 2015; Felin *et al.*, 2015). A logical concern is the sample size which has considered the largest, representative NPOs in the geographical scope of this study. The geographical limitations have been a conscious choice. Finland has the highest domestic reuse rate among other Nordic countries (Paras and Pal, 2018). The country is a pioneer in textile circularity and has also obtained a comprehensive overview of the textile flows in the country (Dahlbo *et al.*, 2021).

Two main research directions could be suggested for the continuation of this study. Firstly, most of the RSCs of NPOs expand far beyond the borders of the country, where these organizations collect textile donations. A supply chain mapping exercise can help future research to understand the full scale of NPOs’ reverse flows and their environmental (and societal) impact. Secondly, the discussion around the evolving non-profit sector and becoming alike to social enterprises (Maier *et al.*, 2016; Reilly, 2016) remains open for scientific contribution. By choosing an alternative to collaborate with textile recycling firms, NPOs will likely need to adopt a mindset of social enterprises and business-like goals. In this way, NPOs could reduce post-use textile exports and contribute to increasing domestic textile circularity. Future research could support this transition with high-quality insights into managing these new forms of cross-sector relationships.

## 6. Conclusion

The study examined one of the NPOs’ revenue-generating programmes – textile reuse through the charity second-hand shops. To advance the knowledge of RSC management in the non-profit context, this study investigates how NPOs that have adopted such revenue-generating programmes manage their RSCs for textile reuse. The study provides elaboration on the existing key RSC processes using a pre-existing conceptual idea of microfoundations of capabilities. The results demonstrated which lower-level, granular practices within the scope of the key RSC processes influence the quality outcomes in textile reuse. Future research directions can expand the scope of this study or investigate the cross-sector partnerships for advancing textile reuse and recycling initiatives.

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