

Style in Reverse

A qualitative study of reverse logistics design and impact on competitiveness in small firms

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Style In Reverse

Abstract:

Product returns are an area that research has shown creates problems for many firms. For e-commerce firms, due to the nature of the business model, it becomes a key issue. While there is literature highlighting how the reverse logistics process is designed for larger companies and the benefits derived from successfully doing it, the literature is sparse regarding small firms. However, the problem with returns exists for smaller firms too. To contextualize, a qualitative study has been done, interviewing 10 small firms in the fashion industry. The aim was to explain what aspects are considered when designing the reverse logistics in small firms, and whether the design aids the firm's competitiveness. After analyzing the empirical data from the interviews with the Resource-Based View theory (RBV), the findings highlighted 3 key dimensions that were considered when designing the reverse logistics: Operational considerations, Sales & Product considerations, and Strategic considerations. Additionally, it was found that reverse logistics is connected to competitiveness in 3 main ways. Firms either said that they were competitive through cost and efficiency improvements or a superior customer experience. The last category was firms that did not deem it crucial for competitiveness, instead preferring to do enough not to be at a competitive disadvantage and then using the resources on other core business areas. The analysis with the RBV theory, however, only supported that a non-generic approach to superior customer experience, and cost/efficiency improvements through return prevention could be considered a competitive advantage.

Keywords:

Reverse Logistics, SMEs, Reverse Logistics design, Competitive Advantage, Returns Management

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Definition table

Reverse logistics (RL)	The process of dealing with goods that have been returned to the company by customers (Turner et al., 1994).
Business strategy	A detailed plan for achieving success in one part or all parts of a business (Cambridge Dictionary, 2025).
Small firm	Employee headcount is smaller than ten.
Competitive advantage	The conditions that make a business more successful than the businesses it is competing with, or a particular thing that makes it more successful. Multiples can exist at the same time (Cambridge Dictionary, 2025).

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1. Introduction

1.1 Background and Problem

In today's digital retail landscape, e-commerce sales continue to surge, with global online retail sales projected to reach \$7.4 trillion by 2025 (Statista, 2025). This shift has fundamentally altered how consumers purchase and return products (Marriott et al., 2025). Online return rates range from 20% to 30%, significantly higher than brick-and-mortar settings. This phenomenon has elevated the importance of reverse logistics, the process of moving goods from customers back to firms, into a critical business function (Wang et al., 2021).

Supply chain management has traditionally prioritized forward logistics, while reverse logistics (RL) has received far less attention despite its importance (Bazan et al., 2015). The transition to online commerce has complicated returns processing, as online returns exhibit substantial volume uncertainty and irregularity (Alshamsi & Diabat, 2015; Kaya et al., 2014). The consequences of ineffective returns management span three main dimensions: operational inefficiencies, negative customer perceptions, and sustainability concerns (Alshamsi & Diabat, 2015; Becher et al., 2023; Gao et al., 2023; Russo et al., 2017).

Although the dream scenario for any company would be to have no returns, that is not feasible when selling online (Saarijärvi et al., 2017). Considering this, how can companies manage these challenges? Research has found that if executed well, firms can reap benefits from RL such as operational improvements, strengthened customer loyalty, and reduced environmental impact (O'Kelly, 2023; Saruchera & Asante-Darko, 2021).

For small companies with limited resources, these challenges are particularly acute (Shaharudin et al., 2015). Unlike large retailers with dedicated returns departments, research has shown that many small companies suffer from a lack of a structured process to handle returns (Aryee & Adaku, 2023). However, due to e-commerce's nature, it seems highly improbable that small firms have no plan for returns.

With this background as a foundation, in this study, we aim to understand reverse logistics design and its potential alignment with competitiveness with a deeper exploration under real-world terms for small e-commerce companies.

1.2 Research Gap

While research has established that effective reverse logistics can create benefits, a significant gap exists in understanding how small companies design its RL. To our best knowledge, most existing research focuses on factors of design in mainly large enterprises, such as network design, which are not applicable to small firms due to limited human, capital resources and other characteristics (Shaharudin et al., 2015). The

emergence of digital platforms has reduced entry costs and technical hurdles, enabling small firms to engage in global e-commerce (Elia et al., 2021). Thus, there is a lack of research in an area that has seen big changes and growth over the last decade. As returns management is an area of importance no matter the size of the company, understanding the way small firms design their reverse logistics, and if/ how this might improve competitiveness through ways such as those found for larger firms, is a relevant topic.

1.3 Purpose

Thus, in this study we aim to explore this by looking into how small fashion companies design their reverse logistics processes and if/how these designs help with their competitiveness. The fashion industry is a good proxy to investigate, due to its seasonal nature, rapid product cycles, and high return rates driven by fit, color, and style preferences rather than product defects (Kaushik et al., 2022). Based on this, even small firms in the fashion industry should be highly affected by this issue.

The purpose is twofold: first, to identify the factors that influence reverse logistics design decisions for small firms; and second, to examine if/how these design choices, based on the firm's unique resources and capabilities, support their competitiveness.

This dual focus is necessary because understanding design influences without examining strategic alignment would provide an incomplete picture. Similarly, assessing strategic alignment without understanding the constraints that shape design decisions lack context. Together, these two aspects provide a comprehensive understanding of small companies' reverse logistics.

1.4 Research Questions

Based on the identified research gap and purpose, in this study we aim to address two primary research questions:

- *i) What influences the design of reverse logistics in small firms?*

This question examines the dimensions that shape how small fashion companies design their reverse logistics processes. It explores how resource constraints, firm-specific factors, and other influences affect design decisions. By identifying these influences, the study will provide insights into why small companies make certain design choices and how they navigate the challenges of returns management within their constraints.

- *ii) How does this design, based on the firm's resources and capabilities, support the firm's competitiveness?*

This question investigates the alignment between reverse logistics design and firms' competitiveness. It examines how the design choices made by small fashion companies, based on their unique resources and capabilities, contribute to their strategic positioning. This question builds upon the first by connecting design influences to strategic outcomes,

providing a comprehensive understanding if/how reverse logistics can become a source of competitive advantage.

To explore the research question, a qualitative approach has been selected as the most appropriate methodology, enabling an in-depth understanding of the complex processes through which small companies develop their reverse logistics capabilities.

This is done by applying the Resource-Based View (RBV) theory to the second research question, which provides the theoretical foundation for this study. RBV posits that firms can achieve sustainable competitive advantage by developing and deploying valuable, rare, inimitable, and non-substitutable resources and capabilities (Barney et al., 2001).

1.5 Scope and Delimitations

The research is limited to the e-commerce aspect of returns as it differs significantly from in-store returns. Issues related to fit, color, and style are the main reason for e-commerce returns, which are mitigated by the in-store try-before-you-buy experience. Additionally, this study does not address disposition strategies, which has been extensively studied and is an otherwise important aspect for reverse logistics (Pellicer & Valero, 2018). Since the majority of returns in fashion are due to customer preferences rather than broken products, the discussion about how dispositions strategies such as remanufacturing, recycling etc. becomes less relevant.

2 Literature review

2.1 Issues from reverse logistics

Returned products create difficulties for firms. Firstly, it impairs operational efficiency because forecasting return volumes is substantially more challenging than predicting forward-logistics volumes. (Alshamsi & Diabat, 2015). With the volume of returns being lower, it creates an irregular flow of products with higher risk of bullwhip effect that reduces profitability though operational inefficiency such as increased handling and return costs (Becher et al., 2023; Gao et al., 2023; Kaya et al., 2014). Also, returned products tend to have a lower salvage value and shorter remaining product life cycle, which further reduces value/increases the cost of returns (ibid).

Secondly, Returns processes affect repurchase decisions, mitigated by customer satisfaction through a higher perception of switching costs (Russo et al., 2017). Thirdly, as returns management is closely linked to resource management and waste management, many returns will impact the firm's sustainability (Krishnan & Arundathi, 2024). Outside of the added cost of using more resources, this can negatively impact firms who are required to be, or compete, by being sustainable. To summarize, product returns can negatively impact firms in a variety of ways such as *1) operational efficiency 2) customer satisfaction & experience, & 3) sustainability*

2.2 Benefits of reverse logistics

While returns, as highlighted above, create issues for firms, it is unrealistic to completely stop them (Saarijärvi et al., 2017). However, if handled correctly, return management can still be used to improve competitiveness.

Firstly, research has found that reverse logistics can impact on the operational performance through improvements in delivery, flexibility, quality, inventory size and handling costs (O'Kelly, 2023; Saruchera & Asante - Darko, 2021). Additionally, collected defective products can be analyzed and subsequently redesigned (Pacheco et al., 2018). Moreover, a more efficient use of resources has also been shown to prolong competitive advantage in economic downturns (Dabees et.al., 2024).

Secondly, research has found other benefits related to customer experience and brand image. For instance, reverse logistics can increase supply chain visibility and faster service, which impacts customer satisfaction (O'Kelly, 2023). Research supports that an effective reverse logistics system can increase overall competitiveness and improve corporate image (Vaz et al, 2014). Thirdly, effective reverse logistics has a major positive impact on environmental sustainability through correct handling of returned products which reduces waste (Krishnan & Arundathi, 2024; O'Kelly, 2023).

To summarize, while returned products create issues, previous studies have found that reverse logistics activities can create benefits for a company, if done correctly in 3 main areas: 1) *operational efficiency*, 3) *customer satisfaction & experience* & 2) *sustainability improvements*. Thus, successful reverse logistics can help mitigate the issues highlighted in the previous section.

2.3 Reverse logistics design in scientific literature

This section will outline the major research trends regarding reverse logistics design. Those are 1) *reverse logistics network design* 2) *decision making when designing reverse logistics* & 3) *outsourcing*.

2.3.1 Reverse logistics network design

A frequently studied area is network design, often done through mathematical optimization modelling. For example, models have focused on optimizing the network design by including the carbon footprint or to balance total network profit & environmental impact while considering uncertainty (Gharibi & Abdollahzadeh, 2021; Reddy et al., 2019). Models have been used in studies in a range of industries from the Turkish white-ware industry, to bike sharing in China (Huang et al., 2023; Tuzkaya et al., 2011). There have also been optimization models focusing on service industries, highlighting the great extent of mathematical modelling for optimizing for different goals in existing research (Piplani & Saraswat, 2012). To summarize, a common thread in the studies is that it should be optimized based on the specific situation, goals, and capabilities & resources for the firm in question.

2.3.2 Strategic decision making when designing the reverse logistics system

Studies beyond optimization models identify several critical aspects for designing successful reverse logistics (RL) systems. In their literature study, Aryee & Adaku (2023), identified four areas to consider: 1) Knowledge-based, 2) Human, 3) Physical/material, and 4) Socio-organizational resources. The study also found that customer awareness and demographic factors shape perceptions of RL practices and that financial constraints often act as barriers, necessitating investment in supporting technology for effective RL implementation.

The importance of financial considerations and requisite technology or infrastructure has been echoed in other literature (Beloor & Gowda, 2023). Their study identified these two areas as the most impactful enablers or drivers for RL, while also acknowledging human and knowledge resources as relevant, albeit less critical drivers. The human and organizational aspects are central to RL design, and decisions about RL structure typically integrate objectives from various organizational departments and individuals (Hernández et al., 2011).

In essence, prior research consistently emphasizes the need to consider human resources, knowledge assets, technological infrastructure, financial implications, and organizational structures when making decisions about the design and implementation of reverse logistics.

2.3.3 The outsourcing decision regarding reverse logistics

The outsourcing decision is intrinsically connected to the two preceding sections. Existing research indicates that a process should be outsourced if the firm lacks the necessary resources to execute the process (Espino-Rodríguez & Padrón-Robaina, 2006). Not only cost or efficiency improvements, but also strategic implications need to be considered (ibid). If the reverse logistics activities are not part of a firm's core competencies, it can be beneficial to outsource it as it allows the firm to focus on its core activities (Insinga & Werle, 2000; Tavana et al., 2016). Research has also found that some firms are not experienced or skilled enough in the activities involved in reverse logistics and thus choose to outsource it (Bai & Sarkis, 2019). Supporting this, there is literature, albeit from 2002, which concluded that if the firm lacks the proper resources and capabilities to do it themselves, the correct decision is outsourcing (Krumwiede & Sheu, 2002).

2.4 Literature critique

While current literature gives a good overview of reverse logistics in larger firms across different contexts such as operations, customer experience, and sustainability, to the best of our knowledge, reverse logistics in smaller firms remains an overlooked area.

There is a clear distinction between large and smaller firms. Small firms typically operate under distinct constraints, including limited human and capital resources, lower and more uncertain return volumes, which can make findings from larger firms inapplicable (Karl, 2024). Furthermore, much of the existing literature centers on network-design strategies, yet SMEs, with their limited organizational scale, scarce financial resources, and inadequate IT infrastructure, rarely possess the capacity to develop and manage such complex networks (Lutfi et al., 2022).

One of the few studies on small firms concluded that they often lack plans and structured RL, mainly due to volume uncertainty and prioritizing forward logistics (Aryee & Adaku, 2023). On the contrary, another study conducted on 420 SMEs found that a good return strategy can lead to cost savings achieved by implementing aligned RL processes in the organization (Pawar et al., 2024). The conclusions stand in direct opposition to one another, as having a returns strategy does not align with small firms lacking a structured approach.

Either way, the understanding of reverse logistics in the context of small firms, such as how it is designed and whether or how the benefits highlighted in the literature are

captured, remains unclear. Hence, this study aims to explore this gap and to answer calls for more qualitative studies in the field of reverse logistics (Marriott et al., 2025).

3. Theoretical Framework: The Resource-Based View (RBV)

3.1 Introduction to the Framework

This qualitative study employs the Resource-Based View (RBV) as its primary theoretical lens. Originating within strategic management, RBV has become an influential framework for understanding how firms achieve and sustain a competitive advantage (Aryee, 2024; Kraaijenbrink et al., 2010). Its central proposition is that a firm's unique bundle of internal resources and capabilities, rather than solely its positioning in the external market, forms the foundation of its competitive success (Barney et al., 2001.; Komakech et al., 2025).

Given this study's focus on *i) What influences the design of reverse logistics in small firms?* *ii) How does this design, based on the firm's resources and capabilities, support the firm's competitiveness?* RBV offers a highly relevant framework. It directs attention towards the internal assets, processes, knowledge, and competencies related to reverse logistics, allowing for an in-depth exploration of how these might be leveraged strategically. This approach is particularly suited for a qualitative inquiry, as it facilitates an exploration of the *nature* of these resources and capabilities and *how* they are perceived and utilized within the firm. It also links well with what is highlighted in the literature review, in which resources and capabilities are common themes.

Additionally, RBV is applicable even if a firm's reverse logistics processes *do not* underpin its competitive advantage. In such cases, the framework helps identify these resources or capabilities as potentially valuable but perhaps not rare, inimitable, or effectively organized to capture strategic value. This allows the research to answer the core question of whether, and *how*, reverse logistics serves as a competitive tool within the studied firm(s).

3.2 Core Concepts of the Resource-Based View

RBV revolves around two fundamental concepts: resources and capabilities.

- **Resources:** Resources encompass the wide range of assets, attributes, processes, information, and knowledge controlled by a firm that enable it to formulate and execute strategies aimed at improving its efficiency and effectiveness (Kraaijenbrink et al., 2010). These can be either tangible or intangible resources.
- **Capabilities:** Capabilities refer to a firm's capacity to deploy its resources effectively to achieve a desired outcome (Barney et al., 2001). Unlike resources, which are often static assets, capabilities are dynamic and embedded within organizational routines, processes, and collective know-how. They represent the firm's distinctive competencies in performing specific activities (ibid).

3.3 The VRIO Framework: Assessing Strategic Potential

To determine if a specific resource or capability can be a source of *sustainable* competitive advantage, RBV utilizes the VRIO framework (Barney et al., 2001).

The VRIO criteria are (Barney & Hesterly, 2015):

- Valuable: Does the resource or capability enable the firm to exploit environmental opportunities or neutralize threats?
- Rare: Is the resource or capability possessed by few, if any, current or potential competitors? A unique, highly efficient returns processing network or specialized refurbishment knowledge might be rare within a specific industry.
- Inimitable: Is it difficult or expensive for competitors to acquire or develop the resource or capability? Inimitability can stem from unique historical conditions (e.g., path dependency in process development), causal ambiguity (competitors cannot discern *what* drives success), or social complexity (based on intricate relationships and trust) (Barney et al., 2001).
- Organized: Does the firm possess the necessary organizational structures, processes, management systems, and complementary capabilities to effectively exploit the valuable, rare, and inimitable resource or capability? Even with a potentially advantageous reverse logistics process, a firm must be organized to integrate it effectively into its overall strategy and operations to realize the benefits.

3.4 Limitation & Theory modification

A significant critique of the RBV concerns its potential focus on existing internal resources, which may not fully capture how their value changes within dynamic external environments (Kraaijenbrink et al., 2010; Wanjiru Muchiri & M. Muathe, 2024). Factors such as market shifts, technological advancements, and evolving customer demands can rapidly alter the relevance and worth of a firm's capabilities. This is particularly pertinent in logistics, a field heavily influenced by external pressures and partnerships.

3.4.1 Theory Modification: Integrating External Resources and Outsourcing

The traditional RBV, developed in the late 20th century, fundamentally emphasizes a firm's *internal* resources and capabilities as the bedrock of sustainable competitive advantage (Barney et al., 2001.; Wernerfelt, 1984). While foundational and highly influential, the contemporary business landscape characterized by rapid technological change, globalization, complex value chains, and increased specialization, necessitates an evolution of this perspective (Chesbrough & Crowther, 2006). Relying solely on internally developed resources may no longer be sufficient or even feasible for firms aiming to compete effectively in dynamic markets (Teece et al., 1997).

In today's interconnected economy, competitive advantage is often derived not just from what a firm *owns*, but also from what it can *access* through its external relationships and network positioning (Ahuja, 2007). This has led to calls for extending the RBV to explicitly incorporate the role of external resources, assets, knowledge, and capabilities that reside outside the firm's legal boundaries but can be accessed and leveraged through mechanisms like strategic alliances, joint ventures, networks, and outsourcing arrangements (Dyer & Singh, 1998; Lavie, 2006). These external resources can provide access to specialized expertise, technologies, market access, or operational efficiencies that would be difficult, costly, or time-consuming for the firm to develop internally.

Outsourcing, in particular, has become a critical strategic tool for accessing external capabilities. Firms increasingly outsource activities, ranging from non-core functions to strategically important operations, to specialized external providers who can often perform them more efficiently or effectively due to economies of scale, specialized knowledge, or superior technology (Espino-Rodríguez & Padrón-Robaina, 2006; Quinn & Hilmer, 1994). This is highly relevant in the context of logistics and supply chain management, including reverse logistics. Many firms rely heavily on Third-Party Logistics providers (3PLs) or other specialized partners to manage the complexities of returns processing, refurbishment, recycling, and disposal (Marasco, 2008).

Therefore, a purely inward-looking RBV assessment risks overlooking the significant competitive implications of these externally sourced capabilities. The ability to effectively identify, manage, and integrate resources and capabilities from external partners can itself be a source of competitive advantage, a capability related to managing relationships and networks (Dyer & Singh, 1998; Lavie, 2006).

For this study, examining reverse logistics operations requires acknowledging this modern reality. The firm's performance and competitive position in handling returns may depend significantly on the capabilities of its outsourcing partners and the quality of its relationship with them. Consequently, this research adapts the traditional RBV framework (fig 1) by explicitly considering how the firm leverages and integrates both internal and externally accessed resources and capabilities (e.g., those provided by logistics partners) within its RL. This modified approach allows for a more comprehensive analysis, reflecting contemporary business practices and the networked nature of modern value chains, particularly in logistics-intensive operations. This is essentially relevant for the aim of this study, as small companies often lack the internally developed resources and capabilities for RL due to high cost-requirements (Lutfi et al., 2022).

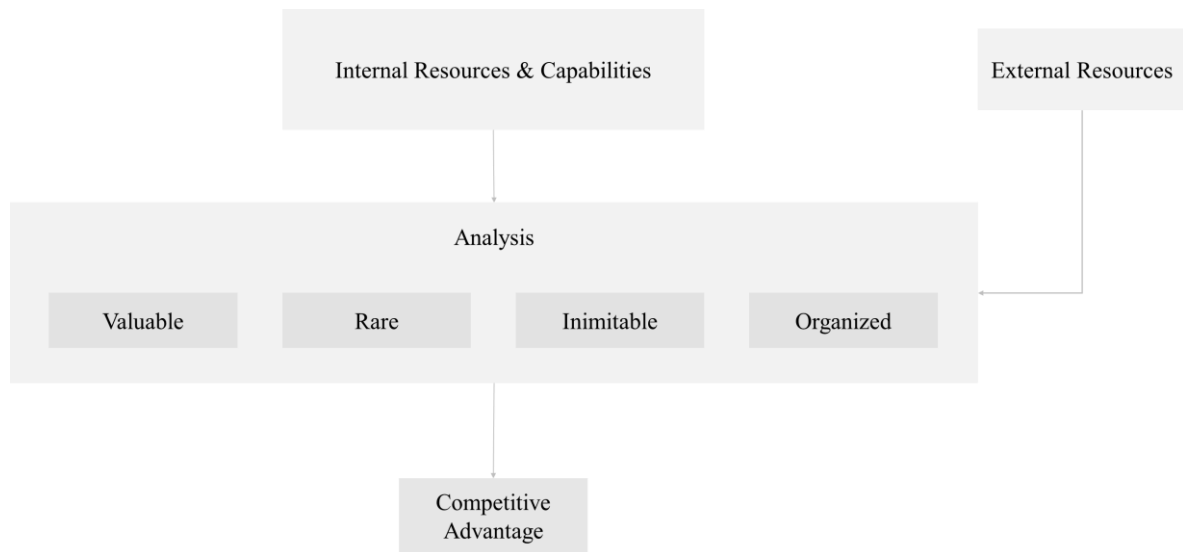


Figure 1. Modified RBV theory – by Eriksson Östh & Rahimi (2025) inspired by Barney et al. (2001)

4. Methodology

4.1 Research Design & Philosophical Orientation

This study employed a qualitative exploratory research design, which aligns with the aim of exploring small firms' reverse logistics design. The exploratory nature provides the adaptability needed to investigate emerging insights, complementing the abductive approach that characterizes this research (Saunders et al., 2019).

The study is grounded in an interpretivist paradigm, which acknowledges the subjective nature of business strategy and competitive advantage. As Saunders et al. (2019) note, interpretivism aims to understand the subjective meanings that shape how individuals perceive and respond to their environments. This philosophical stance is particularly appropriate for this research because strategic views including RL approaches, represent companies' subjective responses to their perceptions of competitive landscapes, industry changes, and competitor actions. There is no objectively "correct" business strategy; rather, each company develops approaches based on their unique understanding of market conditions and internal capabilities.

The abductive approach allows for a dynamic interplay between theory and empirical data. While the modified RBV provides the initial theoretical framework, the abductive approach enables the identification of contradictory themes or ideas that may not align with existing theory. This methodological flexibility is valuable because it allows for theoretical adaptations that can create a more nuanced understanding of how RL processes contribute to competitive advantage in small companies. Additionally, this approach helps mitigate researcher bias by allowing for theory revision when empirical findings suggest alternative explanations (Dubois & Gadde, 2002).

4.2 Participant Selection & Sampling Strategy

4.2.1 Sampling Approach

This study employed a purposive sampling approach to select small e-commerce fashion companies. The purposive sampling technique was chosen because it allows researchers to select participants based on their relevance to the research question (Robinson, 2014). In this case, the selection focused on companies that:

1. Operate primarily in e-commerce fashion/accessories
2. Meet the definition of small enterprises

Within this purposive framework, companies were randomly selected from an initial pool of eligible organizations to reduce selection bias. This approach balances the need for relevant cases with the desire to avoid researcher bias in the selection process.

4.2.2 Sample Characteristics

The final sample consisted of 10 small e-commerce fashion companies (Table 1) with saturation of answers starting to occur after 6-7 interviews. This sample size is appropriate for qualitative research of this nature, as it allows for in-depth exploration while providing sufficient diversity of perspectives to identify patterns (Guest et al., 2006). The companies varied in terms of specific fashion segments, years in operation etc. providing a range of contexts to examine RL processes. The companies interviewed were chosen based on a combination of broad outreach to hundreds of companies, as well as from the researchers' connections, to collect rich and nuanced data.

Table 1. Company Profiles

Pseudonym	Role	Industry/Sector	Years at Co.	Primary products	Customer segment/geography
Peter Streetwear	Co-Founder	Fashion	2	Streetwear & accessories	Males 12–25 in Sweden
Emma Womenswear	COO	Women's fashion	5	Flexible-fit classics for 50 +	Women 50 +
Erik Athleisure	CEO	Apparel (D2C athleisure)	6	Women's comfy wear	Women 25-55 in 60 countries
Karl Jewelry	Founder	Up-cycled jewelry	3	Silverware rings	Vintage lovers
Liam Pre-owned luxury	Sole proprietor	Second-hand luxury fashion	6	Pre-owned designer apparel	Private buyers 15–60, mixed
Lars Accessories	Founder & GM	Women's Accessories	6	Accessories	Mass-market "masstige"; European-markets
Filip Footwear	CEO	Footwear	6	Boots/Shoes	Global cold-climate consumers
Simon Merch	Co-Founder	Custom merch	1.5	Clothing	School unions & SMEs
Emil Hoodies	Co-Founder	Print-on-demand apparel	1	Hoodies & tees.	Minimalistic shoppers
Edvin Bags	Founder	Bags & luggage	4	Bags, backpacks, suitcases	Broad students → travelers

4.3 Data-Collection Procedures

4.3.1 Semi-Structured Interview Approach

Semi-structured interviews served as the primary data collection method, aligning with the interpretivist paradigm by allowing for deeper understanding of participants' perspectives (Saunders et al., 2019). This interview format provided the flexibility to explore emerging themes while maintaining sufficient structure to ensure comparability across interviews.

The semi-structured format complemented the abductive approach by allowing interviews to begin with predetermined topics (deductive element) while providing freedom to explore new directions based on participant responses (inductive element). This balance was essential for capturing the nuanced ways in which RL processes contribute to competitive advantage in different organizational contexts.

4.3.2 Interview Protocol Development & Execution

The interview protocol was developed based on research questions and the theoretical framework of the Resource-Based View. Questions were designed to explore how companies' reverse logistics using internal and potential external resources and capabilities contribute to competitive advantage, with particular attention to the VRIO framework components.

The protocol included open-ended questions to encourage detailed responses, followed by probing questions to clarify meanings and explore contexts. This approach helped ensure validity by allowing researchers to verify their understanding of participants' statements during the interview process.

All interviews were conducted online due to the geographical distribution of participating companies across Sweden. While online interviews may limit the observation of non-verbal cues, they allowed access to a more diverse sample than would have been possible with in-person interviews alone (Archibald et al., 2019). The average time was 29:23, and all interviews were conducted in Swedish, which was the native language of all interviewees. This approach created a comfortable atmosphere where participants could express themselves in the language, which they found most natural, reducing the risk of miscommunication. All interviews were recorded and automatically transcribed with participant consent, allowing researchers to focus on the conversation rather than note-taking (See Appendix 1&2 for interview guide and rationale).

4.3.3 Transcription Process

Applying dual verification meaning independent review by each researcher helped identify and correct any errors in the automated transcription, enhancing the reliability of the data. Careful considerations were given to translation to ensure that the meaning behind the words was preserved when converting to English.

4.4 Data-Analysis Approach

4.4.1 Thematic Analysis Framework

This study employed thematic analysis to identify patterns across the interview data. Thematic analysis was selected for its flexibility and compatibility with the interpretivist paradigm and abductive approach (Braun & Clarke, 2006). The analysis followed a systematic process while remaining open to emerging themes that might not align with the initial theoretical framework and was guided by Braun and Clarke's (2006) six-phase approach, which provides a structured yet flexible framework for identifying, analyzing, and reporting patterns within qualitative data (See Appendix 3).

4.4.2 Coding Strategy

The coding process began with independent coding by both researchers to minimize individual bias. This approach allowed for the identification of a broader range of potential codes and themes than would have been possible with a single coder. The researchers then compared their coding, discussed discrepancies, and developed a consolidated coding framework that incorporated insights from both perspectives.

The coding strategy combined elements of both inductive and deductive approaches, reflecting the abductive nature of the research. Initial coding was informed by the Resource-Based View framework (deductive element), while remaining open to unexpected patterns and themes emerging from the data (inductive element). This balanced approach ensured theoretical grounding while allowing for discovery.

4.4.3 Theme Development

Themes were developed through an iterative process of grouping related codes, identifying patterns, and refining conceptual boundaries. The researchers paid particular attention to how different aspects of RL processes contributed to competitiveness, looking for both explicit statements and implicit connections in the data.

The theme development process included the creation of thematic maps to visualize relationships between themes and sub-themes. These visual representations helped identify hierarchical relationships and connections that might not have been apparent in text-based analysis alone. The conclusion of the thematic analysis is illustrated in figure 2.

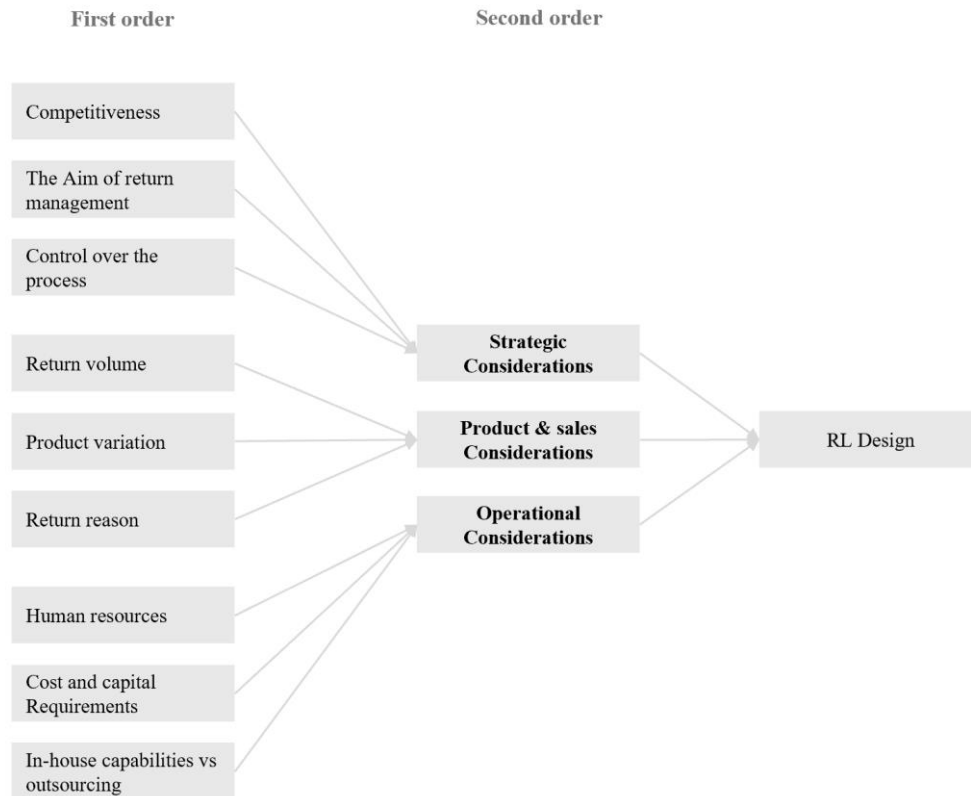


Fig 2. Overview of thematic analysis (Eriksson Östh & Rahimi 2025)

4.5 Trustworthiness & Research Quality

As noted by Saunders et al. (2019), traditional measures of research quality such as validity and reliability are not ideally suited to qualitative studies within an interpretivist paradigm. Therefore, this study adopted alternative quality criteria: dependability and credibility.

4.5.1 Dependability

Dependability was enhanced through the application of a rigorous and standardized structure throughout the research process. Specific measures included:

- Using standardized questions across all semi-structured interviews
- Implementing systematic thematic coding to identify patterns across interviews
- Maintaining detailed documentation of methodological decisions and their rationales
- Employing two researchers to reduce the risk of logic leaps and false assumptions

These measures created a more systematic analytical process, reducing the potential for inconsistencies that can affect qualitative research with smaller sample sizes (Saunders et al. 2019).

4.5.2 Credibility

Credibility, comparable to internal validity in quantitative research, was strengthened through several strategies (Saunders et al., 2019):

- Independent verification of transcripts by both researchers to ensure accuracy
- Dual-perspective review of analytical interpretations to minimize researcher bias
- Use of probing questions during interviews to verify understanding of participant statements

The involvement of two researchers was particularly valuable for enhancing credibility, as it allowed for the detection and mitigation of subjective interpretations or biases that might have gone unnoticed with a single researcher.

4.6 Ethical Considerations

Ethical integrity was maintained throughout the research process through several key measures. Sensitive data collection was kept to a minimum, focusing only on information directly relevant to the study's topic.

Participants were fully informed about the study's purpose through a detailed information sheet and were presented with a consent form which they signed before participating in interviews.

4.6.1 Data Security and Storage

All data was stored securely using Office 365, with access restricted to the research team. This approach ensured compliance with data protection requirements (GDPR) while maintaining the confidentiality promised to participants. As specified in the ethics protocol, all data will be deleted upon completion of the study.

4.7 Limitations of the Methodology

While the methodology was designed to provide robust insights into the research question, several limitations should be acknowledged:

Firstly, the cross-sectional nature of the study provides insights at a specific point in time rather than capturing how RL processes and their competitive implications evolve over time. A longitudinal approach would provide additional insights but was beyond the scope of this research.

Secondly, while the dual-researcher approach helps mitigate individual bias, the interpretivist nature of the research means that findings inevitably reflect the researchers'

interpretations of participants' accounts. The systematic analytical approach and quality assurance measures help address this limitation but cannot eliminate it entirely.

Despite these limitations, the methodology provides a robust foundation for exploring how RL in small companies is designed and if/how it is aligned with competitiveness, generating valuable insights for both academic understanding and practical application.

4.8 Use of Artificial Intelligence

Artificial Intelligence has been used to improve study in several ways. As mentioned previously, recording and transcribing AI was used to expedite the interview process. This technology allowed the researchers to focus on what was communicated during interviews rather than on documentation tasks.

Additionally, AI was utilized to enhance the written presentation of the study. ChatGPT 4o was employed to clarify language and refine the presentation of findings, saving time while improving the quality of the thesis. Importantly, all AI-assisted paragraphs were carefully reviewed to ensure that the original meaning and context were preserved.

To maintain research integrity, all thoughts, analyses, and conclusions originated from the researchers and were not AI-generated. The use of AI thus served to improve efficiency and presentation quality while preserving the intellectual substance of the research.

5 Empirical results

This section presents the empirical findings derived from interviews with representatives from ten small firms. The findings are organized around three core dimensions which were found to affect the design of reverse logistics: 1) Operational considerations, 2) Product and Sales considerations & 3) Strategic considerations.

5.1 Operational Considerations

A primary dimension influencing how small firms approach reverse logistics to potentially remain competitive involves their available resources and the capabilities required to utilize them effectively. Within this dimension, three sub-themes emerged from the interviews.

5.1.1 Human resources

The limited availability of human capital was identified as a significant factor impacting the returns process.

We are incredibly lean, just two and a half employees so we have to stay flexible and can't dedicate anyone solely to returns. [Filip Footwear]

The low volume of returns did not typically justify a full-time role, a situation interviewee contrasted with larger companies possessing greater resources.

If you get big, it's an entirely different thing. Because then you can achieve efficiency. Then you have a workforce. Then maybe you can have your own pool (of people) for when people get sick and everything like that, but when you are dealing with small volumes it is super hard to plan for. [Emma Womenswear]

Furthermore, the management complexity and effort associated with full-time staff were also cited as deterrents:

We do not want a person on full-time employment. Partly, if we want to operate it ourselves, we need our own warehouse, and then we need staff on site... which becomes costly. [Emma Womenswear]

These human resource limitations often necessitate simpler, less specialized approaches to returns management in smaller firms.

5.1.2 Cost and Capital Requirements

Financial considerations, particularly return handling costs, heavily influenced RL design, especially regarding outsourcing. While all firms outsourced the transport,

decisions varied for other functions. One firm used a 3PL for forward logistics but found their return services prohibitively expensive:

We don't do returns (via the 3PL) because we immediately realized it was too expensive [...] We only send it out through them. [Peter Streetwear]

Conversely, another prioritized flexibility over direct cost savings:

I think potential savings are worth less than the reduction in complexity [Erik Athleisure]

However, the same interviewee acknowledged cost optimization's relevance, suggesting cost remains a factor even when not primary focus:

But then they have never optimized their return logistics cost... suddenly it becomes a really big part of your costs... [Erik Athleisure]

Similarly, another participants articulated the difficulties in maintaining profit margins when providing high levels of flexibility towards customers:

We covered all the costs, which basically wiped out our margin whenever an item was returned [Emil Hoodies]

These highlights differing weights assigned to cost versus flexibility, based on firm priorities.

5.1.3 In-house capabilities vs outsourcing

The strategic decision of whether to manage returns processes internally or to outsource them was influenced by a combination of factors related to flexibility, volume, and preferences.

- **Flexibility and Control:** For some firms, maintaining direct control over the entire process, allowing for scalability and adaptability, was a key reason for keeping returns management in-house.

In the long run it is more flexible. It can be scaled up and down. [Erik Athleisure]

- **Volume and Scale:** Firm size and return volume significantly impacted this decision. Companies experiencing very low return volumes often found it feasible and simpler to manage returns internally, viewing outsourcing as unnecessary overhead.
- **Efficiency and Cost-Effectiveness (3PL Advantages):** Firms with higher volumes sometimes opted to outsource warehousing, inspection, or other return functions. The rationale often centered on the perceived superior efficiency and economies of scale offered by 3PLs, including access to more favorable transportation rates.

Additionally, they are so much more effective. They charge per product handled, and if they manage to do that more effectively, they earn more money... also they have much better transport

agreements than we could ever get. We are small. We go through their agreements with logistics partners such as Schenker and Instabox and get their prices. We are so small that we otherwise would have gotten super high prices. [Emma Womenswear]

- **Operational Preference:** Personal preferences regarding operational tasks also played a role. Some entrepreneurs viewed hands-on involvement as integral to their business identity, while others preferred to delegate tasks they did not enjoy.

We keep it in-house because there were so few of us and none of us had much interest in standing around packing orders. [Emma Womenswear]

I would not feel like I did a good job if I let someone else stand here and pack my products. Then, what would I do? It feels like it's part of everything that is running a business. [Liam Pre-owned Luxury] (Indicating a preference for in-house handling)

Another participant explained their decision to outsource logistics for larger items due to handling preferences, stating:

Our suitcases go to a third-party warehouse, but backpacks we handle in-house returns come straight back to us. [Edvin Bags]

Though the latter quotes mention packing, they reflect broader attitudes influencing the RL approach. The in-house/outourcing decision thus represents a trade-off based on resources, volume, and managerial preferences.

5.2 Product & Sales Considerations

Product nature and sales characteristics formed the second dimension affecting RL design. Key aspects included return volume/rate, product variation, and return reasons.

5.2.1 Return volume

Return volume correlated with company size, ranging from negligible to thousands annually. Rates clustered near 20% or 0%. Low-volume firms typically invested less in RL optimization, favoring simple, manual processes aligning with resource constraints.

Everything (the returns process) is completely manual as it happens so seldom. [Lars Accessories]

Because I have so few returns, I feel like it is unnecessary to create a partnership (for 3PL returns). [Liam Pre-owned Luxury]

Online we run about 20 percent returns, it stays between 15 % and 25 % almost whatever we do. So we make it easier with providing online return forms – Filip Footwear

5.2.2 Product variation

Product variation (sizes & colors) influenced return frequency, although it did not necessarily alter the design of the reverse logistics for the interviewed firms.

It was when we began buying in more (sizes). Some S, L and XL, that we realized returns would increase. [Peter Streetwear]

5.2.3 Return reason

The condition and reason for returned products significantly shaped the handling process.

- **Defective Products:** A consistent approach was observed for defective items. Firms generally aimed to resolve the issue quickly and efficiently to maintain customer satisfaction, viewing defects as their responsibility. This typically involved offering free returns and prompt replacements or refunds, following up with quality checks for validation. For low-value items, practicality often favored goodwill over rigorous investigation.

If we see that it is something we address we contact the customer, but most of the time we just end up paying the money back. Partly, to make it as easy as possible because the products are not that high value, and paying loads for transport costs back and forth (is not worth it). [Lars Accessories]

- **Non-Defective Products:** Non-defective returns, which was the largest category, showcased another approach:

Roughly 90% of our returns are simply size-related. [Filip Footwear]

If you want to change, we often offer free returns (so they buy again). [Emma Womenswear]

- **Prevention Strategies:** Acknowledging the costs associated with fit returns, companies prioritized preventative measures. This involved enhancing product information, notably through detailed garment measurements and precise descriptions of fit characteristics.

Many companies have sizing guides for which measurements your body should have. We instead have measurements of the garment... This means we can tell our customers to get a top they like, and measure it. Then you can compare that to this one (on their website). [Emma Womenswear]

- **Data Utilization:** Many firms tracked return reasons to inform product improvements or adjust sourcing, thereby strategically reducing future returns.

Then we do a deep-dive in specific cases where we want to improve products and get an edge by reducing returns for a high potential product. [Erik Athleisure]

- Process Friction: Firms occasionally differentiated process designs for non-defective returns, sometimes incorporating minor friction points, like required pre-contact or nominal fees. The goal was typically to discourage costly casual or excessive returns, rather than deterring legitimate ones altogether. While some offered free returns to maximize convenience.

Sending one pair to Germany is 250 SEK out and 250 SEK back, free returns would kill 500 SEK of margin in a flash. [Filip Footwear]

5.3 Strategic Considerations

The third dimension influencing reverse logistics design is the firm's broader strategic consideration. This encompasses its competitive positioning, the specific goals set for return management, and the desired degree of control over the return process. These strategic elements provide context for understanding the operational choices discussed previously.

5.3.1 Reverse Logistics for Competitiveness

While not all firms viewed it as an advantage, several firms recognized the strategic importance of returns management. Those focusing on product quality or operational excellence often integrated efficient returns handling into their value proposition.

- One firm targeting an underserved segment with quality products used direct email communication for returns to gather detailed feedback, enhancing products and reinforcing their quality focus.

All our focus is on preventing returns from the start ensuring products are correctly designed to fit well, which significantly reduces our return rate. [Emma Womenswear]

- Another firm explicitly identified its technology-driven operational efficiency, including in RL, as a competitive edge, describing itself as operating "we are a bit more like a tech company than a traditional e-commerce" [Erik Athleisure]. Their digital return portal automated registrations, where customers "register it in our return portal where you can choose the reason and select which products you are returning" [Erik Athleisure], streamlining the process and generating valuable data.
- Some firms viewed smooth return procedures and absorbing exchange costs "But if someone wants to make an exchange, we usually cover that cost" [Liam Pre-owned Luxury] and "We use our 60-day return window as an USP, it's something we really flag for customers." [Edvin Bags] as essential for building trust and supporting their overall customer experience.
- The strategic use of return data for product improvement was common: "Then we do deep-dives in specific cases where we want to improve products and understand how we can get an edge in lowering the return rate for a product with high potential" [Erik Athleisure]. This

reflects a strategic view of returns not just as a cost center, but as a source of learning, prompting changes in how they work.

- Ultimately, some saw the advantage not in returns alone, but in the holistic integration of product, service, and process:” The combination of all those factors, I believe, is what makes customers choose us over others.” [Erik Athleisure] And “The real answer is probably the sum of doing a lot of small things better.” [Erik Athleisure]

5.3.2 The Aim of Returns Management

The strategic aims driving returns management practices varied but generally centered on several key objectives:

- **Efficiency and Cost Reduction:** A primary goal across most firms was to process returns efficiently to minimize costs and quickly reintegrate resellable products into inventory. Profitability was clearly linked to effective return handling: “to get the product back, inspect the product, and try to get it back into the system as quickly as possible”. [Peter Streetwear]
- **Return Prevention:** Particularly in sectors like clothing, a major strategic focus was on preventing returns proactively by addressing root causes like poor fit or inadequate product information. This was viewed as more beneficial than merely handling returns efficiently: "So all our focus is on eliminating returns from the start, so that they don't become returns." [Emma Womenswear]
- **Customer Satisfaction and Trust:** Even for firms with low return rates, providing a smooth (speed and ease) and fair return process was seen as crucial for customer reassurance and loyalty as mentioned to be a source of competitiveness.
- **Discouraging Undesirable Behavior:** As mentioned previously, some firms strategically introduced minor friction or costs to discourage excessive or opportunistic returns, balancing customer service with cost control.

In Sweden we offer free returns for convenience, but outside the country we pass the cost on to the customer. [Filip Footwear]

These aims shaped the operational choices, determining whether processes were manual or automated, handled in-house or outsourced, and whether they incorporated sophisticated data capture or simpler methods.

5.3.3 Control over the process

A consistent strategic theme was the importance of maintaining control over critical aspects of the return process, regardless of the operational setup (in-house, outsourced, or hybrid). This control was deemed essential for safeguarding product quality, ensuring brand consistency, and managing customer interactions effectively.

- Firms with low volumes often justified fully manual, in-house processes by the need for direct oversight and the manageability of the workload: "Since there are so few returns, we actually have a manual process. [...] Everything is completely manual because it happens so seldom." [Lars Accessories]

Even when using 3PLs for warehousing, direct handling of returns allowed for crucial quality checks and personalized customer responses:

We work with warehousing, so we work with third-party warehousing... but usually it's just that a customer gets in touch, and then we handle it manually. [Lars Accessories]

- Companies employing more automated systems, like digital return portal, still retain critical control points. While technology streamlined registration "You register it in our return portal..." [Erik Athleisure], final decisions and quality verification often remained internal: "in the vast majority of cases, we take it from there manually. We see what the customer writes and decide how we should resolve it." [Lars Accessories] This hybrid approach balanced efficiency with strategic oversight.
- Companies offering personalized goods, viewed direct control as a non-negotiable for maintaining quality and authenticity standards, which is essential to the business's value proposition:

I pick up the ring, resize it, re-package it and bring it back myself, that way I keep full control over quality. [Karl Jewelry]

Looking across the board, retaining control over key stages; whether inspection, customer communication, or final disposition was viewed as strategically vital. The chosen method of achieving this control varied, but the underlying principle remained: ensuring the return process aligns with the firm's quality standards, brand image, and customer relationship goals.

6. Analysis

In the empirics, three main areas were identified as impacting RL design within the context of small firms: *1) Operational considerations* *2) Product and Sales considerations* & *3) Strategic considerations*.

The empirical dimensions identified resonate partially with existing literature yet also highlight distinct size characteristics. The significance of internal resources and capabilities aligns broadly with established RBV principles and specific RL studies (e.g., Aryee & Adaku, 2023). However, while Aryee and Adaku's (2023) literature study identified knowledge-based and socio-organizational resources as key, our findings emphasized human resource limitations and physical/material aspects, with less focus on the former two. This divergence may stem from the prevalent use of outsourcing among the studied companies to handle complex RL tasks, a strategy consistent with recommendations for firms lacking internal expertise (Bai & Sarkis, 2019; Krumwiede & Shey, 2002). The diminished emphasis on socio-organizational resources could reflect the simpler organizational structures typical of smaller firms. Product and sales characteristics emerged as a more pronounced aspect than often explicitly detailed in literature focused on larger corporations. Finally, the influence of overarching business strategy, while implicitly recognized in network design literature concerning goal alignment, e.g. (Gharibi & Abdollahzadeh, 2021; Reddy et al., 2019), was found to be a more explicit and central driver in the strategic thinking around RL among the interviewed firms, shaping their approach based on competitive priorities.

6.1 Evaluating Competitive Advantage Claims via the VRIO Framework

The empirical data revealed distinct strategic orientations towards RL among small firms, primarily centered around achieving cost and efficiency improvements, enhancing customer experience, or treating RL as an operational necessity rather than a core strategic differentiator. Applying the VRIO framework allows for a rigorous assessment of whether the resources and capabilities underpinning these orientations can realistically generate a sustained competitive advantage.

6.1.1 Competitive Advantage through Cost and Efficiency Improvement

Firms adopting a cost and efficiency orientation perceive RL as a way to increase competitiveness by minimizing expenses and optimizing operational flow. This perspective aligns with literature highlighting operational efficiency as a key benefit of effective RL (O'Kelly, 2023; Saruchera & Asante-Darko, 2021; Ullah, 2023). Two primary approaches were observed: proactive return minimization through RL design and outsourcing activities to leverage external scale or specialization (see figure 3).

Proactive return minimization, i.e., providing detailed product information or precise sizing guides, represents an organizational capability – the deployment of resources to prevent returns. This capability is undoubtedly *Valuable*, directly reducing operational costs. Its *Rarity* is questionable; while the concept is widespread, consistently effective execution may be less common. The primary challenge lies in *Inimitability*. Specific tactics, like enhanced guides or return fees, are often observable and replicable by competitors over time, even if replicating the underlying tacit knowledge or organizational routines takes effort. Assuming the firm is *Organized* to capture the value, this capability is more likely to provide a temporary competitive advantage rather than a sustained one, as competitors can eventually imitate successful practices. This nuances the general claims in some literature (O’Kelly, 2023; Saruchera & Asante-Darko, 2021; Ullah, 2023) by distinguishing between temporary and sustained advantages, a distinction central to RBV.

Outsourcing RL activities for cost or efficiency gains, often involving third-party logistics providers (3PLs), presents a different VRIO profile. Accessing standard 3PL services, particularly for smaller firms with limited bargaining power, typically relies on resources (the 3PL's capabilities) that are inaccessible for others. Competitors can readily access similar providers and services. While *Valuable* for achieving potential cost savings or accessing specialized skills, standard outsourcing arrangements are generally not *Rare* nor *Inimitable*. Consequently, leveraging standard outsourcing for efficiency typically leads to competitive parity, allowing the firm to match competitors' operational standards. To conclude, standard outsourcing for efficiency alone is unlikely to be a source of sustained competitive advantage according to RBV principles.

	Cost/Efficiency (return prevention)	Cost/Efficiency (standard outsourcing)
Valuable	✓	✓
Rare	✗*	✗
Inimitable	✗	✗
Organized	✓	✓
	Temporary advantage	Parity

Fig 3. VRIO analysis of cost/ efficiency advantages

6.1.2 Competitive Advantage through Superior Customer Experience

Alternatively, some firms viewed RL as a strategic tool to enhance competitive advantage by cultivating a positive customer experience, aiming to foster loyalty and repeat business. This orientation often manifested in practices like simplified return processes,

accessible customer support, and frequently, free returns, aligning with findings that positive RL experiences can build customer value (O’Kelly, 2023). The underlying assumption is that the long-term benefits of customer loyalty outweigh the immediate costs associated with accommodating returns. The analysis revealed two distinct forms of this approach: generic enhancements aimed at broad market appeal and highly tailored processes designed for specific customer niches (see figure 4).

Generic customer experience enhancements, such as adopting widely used free return policies or providing standard-quality, friendly support, are *Valuable* for meeting customer expectations and maintaining satisfaction. However, these practices often lack *Rarity*, as many competitors maintain a similar service levels, and *Inimitability*, since policies and basic service standards are relatively easy to copy. Therefore, providing a generally positive but undifferentiated return experience typically results in competitive parity. In many markets, this has become a baseline expectation; failing to meet it creates a disadvantage.

In stark contrast, a tailored customer experience, exemplified by the firm that specifically simplified its return process for a less technologically adept customer base, demonstrates significant strategic potential under the VRIO framework. Developing and implementing such a process requires deep customer insight and specialized operational design, representing a complex capability. This capability is highly *Valuable* as it improves customer experience. It is *Rare*, as such deep, niche-specific tailoring is uncommon. Crucially, it is difficult to *Imitate*, requiring competitors to replicate not just the process itself but the underlying customer understanding and organizational routines, which can be causally ambiguous and socially complex. Provided the firm is *Organized* to leverage this capability effectively, this deeply tailored RL approach represents a potential source of sustained competitive advantage, differentiating the firm in a way that generic enhancements cannot.

	Generic customer-experience enhancements	Tailored customer-experience processes
Valuable	✓	✓
Rare	✗	✓
Inimitable	✗	✓
Organized	✓	✓
	Parity	Sustained competitive adv.

Fig 4. VRIO analysis of customer experience improvements

6.1.3 Reverse Logistics as Operationally Necessary but Not Competitively Central

A third orientation observed was among firms that did not perceive RL as a primary source of competitive advantage. These firms focused their strategic efforts on other differentiators, such as unique product offerings or superior operational agility. For them, RL needed to be functionally adequate, preventing it from becoming a source of customer dissatisfaction or excessive cost, but was not an area designated for significant strategic investment beyond achieving sufficiency.

This perspective aligns logically with the core values of RBV, which advocate for concentrating resources on the capabilities that underpin a firm's primary competitive advantage (Barney et al., 2001). For other essential business functions, the strategic goal should be to achieve competitive parity efficiently, ensuring they do not become liabilities without diverting excessive resources from core strengths. The firms in this category exemplified this principle. They implemented 'good enough' RL systems, often simple manual processes or standard outsourcing arrangements, which effectively managed returns without major issues. This allowed them to dedicate their limited resources to areas providing genuine differentiation, while maintaining focus on their core value proposition. This approach implicitly acknowledges that not all functions offer the potential for sustained competitive advantage and that strategic resource allocation requires prioritization. It also supports extensions and critiques of RBV that recognize the strategic role of effectively managing non-core activities, including through outsourcing, to support overall competitiveness (Quinn & Hilmer, 1994; Espino-Rodríguez & Padrón-Robaina, 2006).

7. Discussion

7.1 Answer to research questions

i) *What influences the design of reverse logistics in small firms?*

The dimensions affecting the design of reverse logistics in small firms, according to this study, can be divided into 3 main areas: 1) Operational considerations 2) Product & Sales considerations & 3) Strategic considerations.

ii) *How does this design, based on the firm's resources and capabilities, support the firm's competitiveness?*

The first way, competitive advantage through reverse logistics designed for cost/efficiency improvements, can be considered a temporary competitive advantage. However, if it is approached through outsourcing, it is only enough for competitive parity and if it is approached to proactively minimization return it is more likely to provide a temporary competitive advantage.

The second way companies claimed to achieve competitive advantage was through reverse logistics designed for superior customer experience. If this is done generically, it is not sufficient for competitive advantage. However, if designed to specifically target the customer group, that capability becomes unique and can thus constitute a competitive advantage.

The third category were firms that did not consider reverse logistics as a source of competitive advantage. Consequently, the reverse logistics were not designed to contribute to firm's competitiveness. However, if designed to reach a sufficient level, it allowed the firm to focus on its core areas, while not being at a disadvantage, reverse logistics-wise.

7.2 Contribution to existing literature

In regards to RL design, previous research has put great emphasis on resource & capabilities (Aryee & Adaku, 2023; Beloor & Gowda, 2023; Espino-Rodríguez & Padrón-Robaina, 2006; Krumwiede & Sheu, 2002). However, in addition to that, this study also identified *Product & Sales considerations*, and *Strategic considerations*, as impacting the RL design. This might potentially be down to the fact that RBV is a frequently used theory, which specifically looks at that (Barney et al., 2001.). The high volume of quantitative studies might then not investigate those areas as they instead look for statistical findings based on the previous literature (on resources & capabilities). Either way, this study highlighted 2 other areas of interest when considering the design

of the reverse logistics structure, thus enabling a more in-depth analysis and understanding.

This study contrasts with established literature emphasizing operational performance (Saruchera & Asante-Darko, 2021), customer loyalty (O'Kelly, 2023), and sustainability initiatives (Saruchera & Asante-Darko, 2021) as key outcomes of effective reverse logistics. While the findings overlap with the first two aspects, a significant point of divergence is the relative lack of emphasis on sustainability, which, despite its prominence in some cited academic discourse (Saruchera & Asante-Darko, 2021), did not surface as a critical factor for this specific cohort. This might indicate immediate operational demands, market engagement, and strategic positioning may currently outweigh sustainability initiatives in these environments, refining understanding of small firms' priorities.

Lastly, this study contributes to literature by supporting the inclusion of an external dimension into the RBV theory. Earlier literature brought up this concern (Ahuja, 2007; Espino-Rodríguez & Padrón-Robaina, 2006). However, this study did not identify outsourcing, in the context of small firms as enough to achieve competitive advantage, contrary to the literature (Dyer & Singh, 1998; Lavie, 2006). The interviewed firms had no unique external partnerships, meaning that outsourcing could only help achieve competitive parity. While letting the firm focus on core competencies, which previous studies have deemed beneficial, it should rather be linked to avoiding competitive disadvantage, at least for small firms (Insinga & Werle, 2000; Krumwiede & Sheu, 2002; Tavana et al., 2016). Thus, this study can help contribute to the development of the RBV theory, highlighting the unique dynamics in the context of external partnerships.

7.3 Limitations

Due to the interpretivist paradigm in this study, everything said in the interviews has been interpreted by the researchers. While measures were taken to reduce the risk of miss understanding, there still might have been some scenarios where empirical data were not correctly understood. Secondly, this study only judged if the design of reverse logistics theoretically aligned with the firm's said competitive advantage. This study did not consider if said competitive advantage actually existed. Thus, there is a risk that the design purpose of the RL was not achieved in practice. Moreover, it solely depends on the interviewed firms' views of themselves regarding competitive advantage, which may, or may not, be biased in some cases.

7.4 Recommendations for Future Research

Building upon the finding that sustainability was not a primary consideration for the studied firms, contrasting with previous studies future research should investigate the underlying reasons and long-term consequence of not implementing sustainability in small firms.

Another area for investigation concerns how decisions regarding RL, impacted by resource constraints specific to small firms, influence their subsequent developmental trajectory. Specifically, this research could explore whether the RL design evolves over time or exhibits path dependency. This inquiry is relevant because organizational objectives and capabilities often shift due to growth or other strategic changes. Consistent with previous studies, such internal evolution would be expected to impact the optimal design of the RL system.

8. Conclusion

The aim of this study was to investigate how reverse logistics is designed in small companies, and if the design improves the competitiveness of the firm. The study highlighted three main areas that affected design: 1) *Operational considerations* 2) *Product and Sales considerations* & 3) *Strategic considerations*. The firms interviewed mentioned the RL improved competitiveness in a range of ways, such as through different types of operational improvements and better customer experience. However, the analysis showed that it could only be considered a competitive advantage if it was truly unique and non-generic, such as a tailored returns process for the specific customer group. Otherwise, small firms lacked the ability to create processes or systems that were unique and hard to imitate, meaning RL instead only prevented the firm from falling behind its competitors. Building on this point, some firms thus viewed RL as necessary to not being at a disadvantage, but then preferred to focus their resources on the core areas of the business.

9. Implications for Practitioners

9.1 Implications for Managers and Founders/Owners

9.1.1 RL design

Finding: Based on empirical data, 3 dimensions were identified that shape the design of the reverse logistics in small companies. 1) Operational considerations, 2) Sales and Product considerations & 3) Strategic considerations.

Implications for Practitioners: This finding gives a good framework for managers/founders to consider when developing or evaluating their RL.

Actionable Steps to Implement: The 3 dimensions identified, plus their subcategories, can be used as a comprehensive framework for either evaluating or initially designing the reverse logistics. While we do not claim that the framework is fully exhaustive, it still gives a good overview, considering different aspects that are important for a business. For example, when a small firm evaluates the design of RL, it can be used as a checklist.

9.1.2 RL for competitiveness

Finding: This study identified two ways that a small firm can gain a competitive advantage through RL: either RL should be tailored to the specific segment and target market, or cost and efficiency improvements.

Implication for Practitioners: Small firms must decide if they want to focus on RL as a source of competitiveness or view it as something that is necessary to serve customers but not competitive, i.e., competitive parity and achieve the baseline expected.

Actionable Steps to Implement: To translate these implications into practice, e-commerce leaders should first conduct a comprehensive strategic overview of their existing RL processes. This overview will help identify any misalignments with the overarching business strategy and pinpoint specific areas where reverse logistics can be leveraged for competitive differentiation.

Following this, if the firm is aligned and decides on designing tailored reverse logistics by deeply understanding the customer segment in terms of technology usage, information processing, overall needs, demographic trends, etc., and decides to gain a competitive advantage through cost and efficiency improvements, it needs to proactively prevent and minimize returns by providing sufficient product information regarding sizing between suppliers and buyers. This is essential since fit/size is one of

the main return reasons, and thus improvements in this area will drastically reduce overall returns. Other measures could include increasing steps in the return process, implementing a strategic return fee, etc., which have a direct impact on cost and operations.

Finally, it is vital to create a feedback loop by integrating customer feedback gathered during the returns process directly into marketing strategies and product development cycles, thereby continuously refining offerings and proactively reducing future return rates. To measure the impact of these initiatives, relevant Key Performance Indicators should be tracked. These include the overall Return Rate and its breakdown by product, category and market, which helps to identify patterns and problems with products. For example, if the return rate for a specific product category in the German market is higher, it can be investigated for improvements. Customer satisfaction metrics like Net Promoter Score or customer satisfaction score (CSAT), specifically collected after the return process, can help identify a better flow and return process from the end-users' perspective.

On the other hand, if a firm wants to have its focus on other aspects of business while keeping margins and a functioning return handling process, it should track the Cost of Returns Processing, often expressed as a percentage of sales or on a per-item basis.

Ethical Considerations: The pursuit of competitive advantage through reverse logistics must be balanced with ethical responsibilities. This includes ensuring transparency with customers regarding return policies and data usage. Fair labor practices within returns processing facilities are paramount, avoiding exploitative conditions driven by cost-cutting pressures. Furthermore, businesses must consider the environmental impact of their reverse logistics. Misleading claims about the "greenness" of returns processes must be avoided.

9.2 Implications for Third-Party Logistics (3PL) Companies

Finding: According to our study, even though most companies outsource some part of their operations, it is not deemed a source of competitive advantage for small firms.

Implications for Practitioners: This finding is relevant for 3PL companies, as it highlights the core needs for small firms to be 1) price and usage of economies of scale, 2) enhanced and streamlined operations, & 3) preference to focus on the core business area rather than logistics. Thus, the 3PLs should tailor their offering to match those needs when selling to smaller firms.

Actionable Steps to Implement: 3PL providers should consider developing a service model in reverse logistics that is cost-effective not only for the main core services but also for add-ons. For example, smaller firms have less bargaining power when

negotiating contracts for last-mile delivery, something a 3PL can provide. Many of these small firms want to focus on the core aspects of their company and the products they're passionate about, so they don't want to handle logistics. However, services such as inspecting returned products can give a significant insight into quality and product improvement. Smaller companies with limited manpower cannot utilize these insights on their own due to operational complexity, so a simpler operating model such as a monthly suggestion/ insights report, would help them not only streamline and automate the process but also continuously improve it.

9.3 Implications for policymakers

Finding: Sustainability was not an important consideration when small firms designed their reverse logistics.

Implications for practitioners: As customer pressure does not seem sufficient, at least according to the firms interviewed, laws can be put into place to incentivize emission reduction.

Actionable Steps to Implement: While there has been an immense focus over the last decade on sustainability, it was not a topic brought up in great detail during the interviews. When it was brought up, it was more focused on the fact that returns create more emissions due to an extra shipping step, which is bad for the environment, but it was not something that impacted the company's design of the reverse logistics. While more research into this area is needed to draw certain conclusions, this is an area of interest for policymakers due to the emissions from transport and waste from products returned. Shipping by truck, a commonly used method for intra-country transportation, accounted for roughly 7% of total CO₂ emissions, highlighting it as an area of great importance if emissions are to be reduced (Ritchie et al., 2020).

For policymakers, who face strong societal and political pressure to work against climate change, understanding the lack of consideration of sustainability in the reverse logistics for small firms should be a concern. As customer pressure does not seem sufficient to drive change, laws must be put into place to regulate this to reduce emissions that cover all companies and not only the large enterprises. While this would have a smaller impact than targeting large companies, which are responsible for a major share of emissions, it would set a precedent and shape the sustainability of firms that might grow into industry leaders in the future. Moreover, the aggregated impact of change across many small firms can also create a big impact on emissions.

To be more concrete, examples of policies that could be adopted to improve the sustainability focus of small firms' reverse logistics could be taxation on returned products to deter returns. However, this might be problematic, as returns as highlighted

in the literature, likely cannot be eliminated. Thus, adding a tax might be seen as a punishment, as firms cannot completely change their behavior. Thus, another, and potentially better option, could be different schemes to encourage the use of green methods of transport. Either rewarding measures, i.e., subsidies for climate-neutral transport, tax credit for using green transportation, or taxation of non-green transport methods could be options. This, however, is outside of the scope of this study, and the aim of this section is rather to highlight the lack of sustainability when considering product returns. With the new regulations in 2025 now including shipping companies in the EU emissions trading system, that might give more context, which, combined with the findings in this study, can guide policymakers in acting in this area (European Commission, 2025). If done, it could help reduce emissions, which is the ethical action considering the consequences that might happen if global warming continues.

9.4 Implication for consumers

Finding: Sustainability was not a crucial consideration for small firms' reverse logistics.

Implications for Practitioners: If customers deem sustainability important, current measures are not enough to impact on the operations of smaller firms.

Actionable Steps for Implementation: Building upon the last segment, another stakeholder group that can benefit from the findings in this study is consumers. 2 major takeaways are relevant for this group. The first is that most firms valued profits higher than sustainability. Hence, if customers want more sustainable practices, current societal pressures are not enough. This is a relevant finding, as current practices do not put sustainability as a priority. It can be seen that the businesses, on average, took more of a more shareholder-oriented approach to doing business. The debate on shareholder versus stakeholder perspective on business is not within the scope of this business. So while the ethical aspects of the practices of small firms (or at least those interviewed) could be questioned, as returns lead to more emissions, which negatively impact other stakeholder groups, that kind of discussion will not be continued in this study. However, the relevant takeaway from this, for consumers, is that if they genuinely want change, they will have to change tactics to directly impact profits. To translate this finding into actions for customers, it could, for instance, mean only purchasing from firms with a clear sustainability profile, not only stated and communicated but also taken actionable steps, to influence firms to change. This, over time, would force firms to change their behaviors, even if they engage in a shareholder approach. As profits start to drop, companies will have to change practices, as shareholders will be worse off.

However, concluding that the lack of sustainability focus, at least for reverse logistics, is solely down to the actions of firms is perhaps too simplistic. Another perspective on the same topic is that the customers do not actually back up their claim that they value and

are willing to pay for sustainable practices. While one cannot generalize for an entire customer base, the fact that many firms highlighted the issue of customers ordering multiple products with the intention to return most of them does not align with environmentally conscience consumer behavior. The actual answer is probably that the customers are segmented, and that those who care about sustainability are more aware of their behaviors.

Either way, the key takeaway is that most small firms do not seem to take a stakeholder approach to business, and hence, measures targeting profitability will have more impact than simply waiting for the firms to be “corporate responsible”.

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11. Appendix

11.1 Interview material

11.1.1 Interview guide

Appendix 1. Interview Guide for semi-structured interviews

Interview question

Introduction

- Participation in this study is voluntary and can be withdrawn at any moment
- Is it okay if we record and transcribe the interview to ensure that we do not miss anything?
- In this bachelor thesis, participation is entirely anonymous, and you can leave at any moment without disclosing the reason.
- The data will be deleted after the study has been finished.
- Do you have any questions for us about the study?

Company overview

- What is your company doing and what is the business model?
- What is the target audience?
- What is your competitive advantage? What is the point of differentiation?
- Number of employees?

Returns

- Number of annual returns?
- Return rate?
- What are the main reasons for returns?

Returns process

- Can you walk us through your return management?
 - o Number of employees responsible for it?
 - o Do you have a 3rd party that helps you manage it? How do these partnerships enhance your reverse logistics efficiency?
 - o What are the activities to reduce returns?
 - o Do you have any challenges with returns?
 - o How do customer expectations or regulatory pressures impact your reverse logistics decisions?

Linking returns to competitive advantage

- Do you see return management as something important for your company? How important is it in comparison to other key activities?
- Is there any way for you to use reverse logistics as a source of competitive advantage in your firm?
- Do you think your return policy influences customer purchase behavior?

Concluding questions

- Is there anything else you want to mention or think that is relevant for us to know?

11.1.2 Interview rationale

The interview guide was structured to systematically address the research objectives while allowing flexibility to explore emerging themes. Table 2 provides an overview of how interview questions aligned with specific research objectives.

Appendix 2. Interview Guide Mapping to Research Objectives

Research Objective	Interview Questions	Rationale
Identify internal reverse logistics processes	• What reverse logistics processes has your company implemented? • How do you manage product returns from customers? • What happens to returned products in your company?	These questions aim to establish the specific reverse logistics processes used by each company, providing a foundation for subsequent analysis of how these processes contribute to competitive advantage.
Understand resource allocation for reverse logistics	• What resources (human, financial, technological) do you allocate to reverse logistics? • How do you decide on resource allocation for returns management? • What challenges do you face in resourcing your reverse logistics operations?	These questions explore the resource dimension of RBV, examining how companies invest in and develop the resources needed for effective reverse logistics.
Explore capabilities developed through reverse logistics	• What specialized capabilities has your company developed for handling returns? • How have these capabilities evolved over time? • How difficult would it be for competitors to replicate your approach?	These questions address the capabilities aspect of RBV, focusing on how companies develop distinctive competencies in reverse logistics that may contribute to competitive advantage.

Examine competitive advantages gained	• How does your approach to reverse logistics differentiate you from competitors? • What benefits has your company realized from your reverse logistics processes? • How do customers respond to your returns process?	These questions directly address the competitive advantage dimension, exploring how reverse logistics processes translate into market advantages.
Investigate strategic alignment	• How do your reverse logistics processes align with your overall business strategy? • How do you measure the success of your reverse logistics operations? • How have your reverse logistics processes evolved with your business strategy?	These questions examine the strategic integration of reverse logistics, exploring how these processes support broader business objectives.

11.2 Thematic analysis guide

Table 3 outlines the specific activities undertaken at each stage of the analysis process, along with examples of researcher memos that document the analytical journey.

Appendix 3. Thematic Analysis Stages, Activities, and Researcher Memos

Analysis Stage	Key Activities	Researcher Memo Examples
1. Familiarization with data	• Reading and re-reading transcripts • Noting initial observations • Identifying potential areas of interest	"Multiple companies mentioned customer satisfaction as a motivation for reverse logistics, but with different emphases, some focused on retention, others on brand perception."
2. Generating initial codes	• Coding interesting features systematically • Collating data relevant to each code • Maintaining openness to unexpected patterns	"Coding revealed unexpected emphasis on employee skills in returns processing—potential human resource dimension not initially considered in the RBV application."

3. Searching for themes	• Collating codes into potential themes • Gathering all data relevant to each theme • Creating initial thematic map	"Three distinct approaches that impact design: operative tasks, product characteristics, and business goals for returns."
4. Reviewing themes	• Checking themes against coded extracts • Checking themes against entire dataset • Refining thematic map	"The 'competitiveness' theme needs refinement, appears to have two distinct sub-themes related to cost advantage and customer experience advantage."
5. Defining and naming themes	• Refining specifics of each theme • Generating clear definitions and names • Identifying the 'story' each theme tells	The theme 'strategic considerations' captures how companies align reverse logistics with broader business objectives, revealing three dimensions of influence to RL.
6. Producing the report	• Selecting compelling extract examples • Final analysis of selected extracts • Relating analysis back to research question and literature	Final analysis reveals that the most competitive approaches integrate reverse logistics into product development, creating a feedback loop that enhances product quality."

11.3 Interview details

Pseudonym	Interview time	Date
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Peter	33:56	10/3
Streetwear		
Emma	35:56	14/3
Womenswear		
Erik	29:38	18/3
Athleisure		
Karl Jewelry	16:05	24/3
Liam Pre-owned	30:41	26/3
luxury		
Lars	28:06	26/3
Accessories		
Filip	45:31	8/4
Footwear		
Simon Merch	10:45	5/4
Emil	27:47	17/4
Hoodies		
Edvin Bags	35:26	28/4
