

# **Sustainable Reverse Supply Chains and Circular Economy in Multichannel Retail Returns**

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## **Abstract**

The percentage of products being returned in multichannel retail are high and further increasing, yet many retailers and manufacturers are unaware of the importance and scale of this issue. They consider dealing with returns as a cost of doing business, and are oblivious of the potential for conflicts between their Corporate Social Responsibility commitments and their returns practices. This article investigates how far sustainable practices and Circular Economy concepts have been implemented in retail returns systems; it identifies vulnerabilities, barriers and challenges to the implementation of sustainable, circular practices, and suggests ways to overcome them, as sustainability, loss prevention and profit optimisation can go hand in hand with the right approach to the organisation of the reverse supply chain. Implications of this research on strategic management are outlined. The research was conducted using in-depth interviews and observations with 4 major retailers in the UK, 17 structured interviews, 100 retailer website reviews and 3 retail community workshops, all with British and other European retailers.

Keywords:

Product returns, multichannel retail, reverse supply chains, reverse logistics, sustainability, circular economy

## **1 Introduction**

In many areas of the online retail market, levels of returns are high and increasing (Bernon et al., 2018). Causes include the remote nature of the business, where customers may order a selection of products with the intention to keep one and return the others, or where it is impossible to see, touch and try a product before buying it. Additionally, customers do not have the opportunity to ask a shop floor assistant for help with unfamiliar products, and hence may struggle to use them and send them back as 'faulty'.

High return rates are a challenge to companies and often affect their profitability (Asdecker et al., 2017). Solutions may include reverse logistics and the need for inherent flexibility (Bai and Sarkis, 2013); conservation of value; tracking of goods; processing time; internal and external fraud; customer brand perception; corporate social responsibility (CSR) and

sustainability. There is a strong correlation between corporate responsibility and supply chain-level decisions for both the social and environmental dimensions, with sustainable supply chains playing a key role in overall CSR performance (Carbone et al, 2012).

Fowler and Hope (2007) found evidence that companies can maximize returns on investment whilst making progress towards the implementation of sustainable business practices, and that “a proactive corporate environmental strategy can lead to the development of important organizational capabilities that can increase firm competitiveness” (p.28). Corporate strategy needs to include sustainability aspects for companies to remain competitive (Christmann, 2000; McGee, 1998). Similarly, CSR commitments are becoming a more important element in business strategies for companies of all sizes (Ortiz-Avram et al., 2018). Many brands recognise the general societal trend towards greater sustainability, offering clothes made from sustainable cotton, and committing to sustainability goals (M&S, 2015). Recycling programmes where clothing is exchanged for vouchers or loyalty card points exist, such as the H&M take-back scheme (H&M, 2018) or the M&S “shwopping” scheme (M&S, 2019) John Lewis buys back used clothes, sofas, beds and large electrical items via an app. They use a courier service once a value of £50 had been reached (Smithers, 2018). Depending on their condition, collected garments will go to a secondary market (Beh et al., 2016), be transformed into other textiles, or used as insulation fibres. Other items will be resold or recycled, contributing to the Circular Economy (CE) (Ellen MacArthur Foundation, 2017).

The buy online return in store issue is complex and the challenges are often underestimated. This article focuses on those aspects of product returns in multi-channel retail that relate to sustainability and the circular economy. The research questions are:

1. RQ1: What are the barriers and challenges to the implementation of CE practices in dealing with retail returns?
2. RQ2: What opportunities are there for companies to start implementing CE principles?
3. RQ3: What are the theoretical and managerial implications of our findings for dealing with product returns in multichannel retail?

The investigation uses qualitative data collection methods, based on interviews, observations and secondary data collected from major retailers in the UK and Europe. The key findings show that retail returns are not aligned with existing theories and models of CE. Most companies show very little awareness of the importance of product returns to the bottom line or their relevance to CSR commitments; they see the returns as a cost of doing business, and often believe it to be negligible. Therefore, processes are neither streamlined nor well-coordinated. Very few companies appear to have implemented strategies concerned with sustainability and circular economy concepts related to returns.

## **2 Literature review**

### **2.1 Circular economy**

Traditional economies are linear; they “take, make and dispose” (Ellen MacArthur Foundation, 2017). A more sustainable approach is suggested with the concept of a circular economy (CE), whereby waste is avoided and negative impacts reduced as much as

possible. Products and components are redesigned to be reused, repaired, remanufactured (Low and Ng, 2018). The Circular Economy Handbook (Weetman, 2016) offers an in-depth discussion of principles and opportunities across industries and all along the value chain.

The European Commission's Action Plan emphasises the importance for all countries to work towards a circular economy (European Commission, 2014) and matches the U.N. 2030 Agenda for Sustainable Development and the G7 Alliance on Resource Efficiency. A more circular economy will be essential for reaching the Sustainable Development Goals (SDGs) by 2030, in particular Goal 12: sustainable consumption and production. Notwithstanding, whilst the goal is clear, how to achieve it is not. Government subsidies can play a powerful role in enabling companies to implement more sustainable practices (Xie et al., 2019), but few governments offer these. Prieto- Sandoval et al. (2018) developed a set of key elements to assess the implementation level of CE in SME, although the results of this assessment are not yet available. Stewart and Niero (2018) investigate how the implementation of CE principles influences corporate sustainability agendas and find that most activities are oriented towards the product and its packaging. Companies focus more on end- of- life management and sourcing strategies, and less on circular product design and business model strategies. Also, initiatives involving customers are considered critical for the transition towards CE, yet few companies implement this, focussing on collaborations with other companies instead (Ibid.).

In a CE, products should get repaired whenever possible. However, manufacturers may not want to provide local repair capabilities everywhere their products are sold, and returning the products to the manufacturer for repair may not be sustainable economically and ecologically, and additionally inconvenience customers by taking a long time. The original manufacturer may consider endorsing a network of small repair shops, enabling them to execute repairs without breaking warranty (Zsakay, 2018). In reverse supply chains for electronics, for instance, some manufacturers and third-parties collaborate across industries to achieve sustainability (Flygansvær, Dahlstrom and Nygaard, 2018).

Software solutions are being developed to determine where an item should end up: restock, return to vendor, recycle, repair, donate or liquidate. This avoids unnecessary transport, thereby reducing CO2 emissions, and keeps items out of landfills (Shamiss, 2018). Retailer John Lewis (JL) is collaborating with Stuffstr<sup>1</sup> (a social enterprise) to offer an app for re-selling unwanted fashion products purchased from JL (Smithers, 2018). Once a customer has a minimum of £50 worth of clothing to sell, a courier will collect the clothes and the customer will receive a JL gift card for the value of the items sold.

The change in business models for a CE - from selling products to providing services (product service systems / servitisation) - requires also a change in mentality from customers (Akbar and Hoffmann, 2018), away from a model where the ownership of new things is associated with prestige, and where resources such as cars are more readily shared (Laredo and Murray, 2018). Customers also need to learn to perceive remanufactured products as equally desirable as new ones (Hazen et al., 2017). Pioneers such as ReTuna (<https://www.retuna.se>), a shopping mall in the Swedish town of Eskilstuna selling only recycled (upcycled) products, contribute to changing consumer attitudes. Since their opening

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<sup>1</sup> <http://www.stuffstr.com>

in 2015, their turnover has increased to 11,7 million SEK (approx. €11.1mio) in 2018. The centre receives donations of reusable items from the community and then upcycles them before resale. Additionally, ReTuna engages with the local community college for courses on recycling / reuse and offers study visits for individuals and companies.

## 2.2 Supply chains for a circular economy

Batista et al. (2018) review theoretical and practical contributions concerned with better positioning sustainable SCM in the CE context. In particular, Bernon et al. (2018) present a framework for aligning Retail Reverse Logistics (RRL) with circular economy values. They show that there exists little appreciation of how the values of CE can be utilised or embedded in company reverse logistics practices. The proposed framework is intended to improve the alignment between RRL/CE and Sustainability Agenda, Product Portfolio, Supply Chain Integration, Compliance Regulation, Customer-Centricity, and Collaboration. Further, the study by Bernon et al. found that CE is often considered as an extension to sustainability and it needs to be positioned within the CSR (Corporate Social Responsibility) programme of companies.

Genovese et al. (2017) compare the performances of sustainable supply chains versus those using circular economy principles. Direct, indirect and total lifecycle emissions, waste recovered, virgin resources use, as well as carbon maps (providing a holistic visibility of the entire supply chain) are practices that make sustainable supply chains more environmentally friendly and embed CE principles. Geissdoerfer et al. (2018) propose integrating circular business models and circular supply chain management to foster sustainable development. The authors show that different circular business models are driving circular supply chains in closing, slowing, intensifying, narrowing or dematerialising loops. Sustainability requires economic, environmental and social goals, proactive stakeholder management, and a long-term perspective. Cosenz et al. (2019) introduce a systemic design tool for sustainable business models, framing environmental, social, and economic drivers of value generation into a dynamic business model causal feedback structure, to the benefit of researchers, practitioners and policy-makers.

## 2.3 Reverse logistics and reverse supply chains for retail product returns

Buying online and returning items to store is an increasingly popular option and has the potential to generate spontaneous additional sales (Elliott, 2018; Mollenkopf et al., 2007). However, when customers travel to stores to return products, the slight advantage of e-commerce over conventional retail in terms of energy consumption (Pålsson et al, 2017) is likely to be outweighed. Returns processes in e-retailing vary widely across companies (Hjort et al., 2019).

Returns may come from customers or within the supply chain. According to Lee (2018), the latter are usually due to overstock, ordering or picking errors, damaged goods, order

cancellations, or stock becoming obsolete. Reasons for customer returns of electronic goods are typically: true defects; usage complications perceived as defects; pricing differences; wrong expectations; missing parts; wrong model or size; impulse buying and buyer's remorse; product recalls; warranty returns or bad intent. Ideally, a company-wide strategic product reuse programme would be implemented (French and Milliman, 2008), taking into account that more product value can be conserved when less transformation is required - only a slight refresh versus deep remanufacturing or only material recycling (Frei et al., 2016).

One particular issue is that many companies perceive secondary markets as a threat. Products sold a second time, possibly after remanufacturing / refurbishing, might lead to customers buying those instead of a new product, hence the secondary market "cannibalises" the first market. However, this has been shown to be a minor problem in consumer markets (Guide and Li, 2010). Nevertheless, companies often fear that their profit margins would be lower, but forget to consider that the cost of refreshing and re-selling a product can be considerably lower than the cost of making a new product from new materials. Additionally, reusing existing products is more sustainable<sup>2</sup>, using less resources. For instance, Liu et al. (2018) describe an example of a manufacturing company successfully selling both new and remanufactured products in a closed-loop supply chain. It has been shown that this fear of secondary markets is largely unnecessary, and even offering goods online as well as in store can lead to either cannibalisation or synergies (Kollmann et al., 2012), depending on how the channels are managed.

For companies to capture additional profit from optimising their reverse logistics, it is essential for them to recognise the importance of streamlining their reverse processes and having responsibility and visibility at executive management level (Sciarrotta, 2018). This requires measuring and monitoring relevant KPIs (Stuart, 2018), possibly using a Sustainable Balanced Scorecard (Hubbard, 2009).

The Peerless Research Group show how companies operate their reverse logistics (Aschenbrand et al., 2018). They found that for 68% of the 272 participating companies, no one at the corporate level was responsible for reverse logistics. This is ironic as companies would not make a product that costs more to produce, deliver and sell than it generates in income, yet they often spend more in processing the product in returns than it will generate in the end (Egan, 2016) - or they do not care enough to monitor this properly. Optimising their returns strategy is crucial for companies to maximise their profitability (Elliott, 2018; Shaharudin et al., 2015).

Lee (2018) finds that the way returns are typically processed lacks visibility throughout and is generally too slow. Suggested strategies to improve this are:

- Strengthening the front line for preventative action
- Optimising speed and visibility by using dedicated software
- Using a specialised service partner
- Building a network of secondary markets.

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<sup>2</sup> An exception are products that consume energy whilst operating: an already existing older, inefficient car will pollute more than a newer, more efficient one (that needs to be manufactured).

Another problem with product returns is fraud. For eCommerce companies, an astonishing 14% of returns have been found to be fraudulent (Panda, 2018). This shows that whilst generous returns policies are important for customer satisfaction, it is important for company profitability to make returns barriers high, and be tough in enforcing them (Ibid.).

## 2.4 Corporate Social Responsibility and jobbers

Many returned / obsolete products end up being auctioned off to third parties (so-called jobbers), in bulk and at rock-bottom prices. What precisely jobbers do with these large quantities of diverse products in diverse conditions, is largely unknown and subject to speculation ([redacted for review]).

The research on product returns aligns with one of the research gaps identified by Quarshie et al. (2014), namely how CSR and sustainability commitments are implemented in multi-tier supply chains (with jobbers being an important, but neglected tier on the reverse supply chain). Whilst returns processes in e-retailing vary widely across companies (Hjort et al., 2019), imperfect and otherwise unwanted stock usually gets auctioned off to third parties.

According to Frynas and Yamahaki (2016), there are two types of CSR theories: those focusing on external drivers of CSR (such as stakeholder theory, legitimacy theory and resource-dependence theory) and those focusing on internal drivers (such as resource-based view [RBV] and agency theory). Based on the stakeholder theory, consumers / the public are stakeholders who would be disappointed to learn that the use of jobbers conflicts with sustainability CSRs. Similarly, this fact would invalidate the social contract that companies enter with the public through CSR, based on legitimacy theory.

A further approach is to use new institutionalism in sociology, where legitimacy is seen as 'a condition reflecting cultural alignment, normative support or consonance with relative rules or laws' (Scott, 1995, p.45). Here, the issue is seen as one of aligning the organisation with perceived social expectations of sustainable practices but which may, as Cinzkota, Kaufmann and Basile (2014) point out be less beneficial to market legitimacy than to social legitimacy.

Contributing to CSR theory, this project will determine whether the use of jobbers counts as an aspect of Corporate Social *Irresponsibility* (Windsor, 2013), whereby companies do more harm than they do good by making positive CSR commitments. Theoretically, this gives us the opportunity to assess the links between responsibility and legitimacy, which counterintuitively are not always in alignment.

## 2.5 Research gap

There is a lack of empirical evidence in the literature concerning the translation of well-established concepts of CE, supply chains for CE, sustainability and related terms into

working CRS commitments. The environment of reverse logistics and in particular, product returns in a multi-channel environment highlights the conflicts between practice, CSR commitments and more idealistic concepts of CE. In this study, we identify the issues and practices that indicate why the embedding CE concepts in CSR and supply chain practice is slow to materialise and identify opportunities for working towards more circular practice.

### **3 Methodology**

We were able to carry out four in-depth, qualitative studies and 17 shorter interviews with retailers in the UK and Europe, as well as a desktop review of returns policies given on company websites. The organisations were selected purposively and access was achieved by working with an organisation which brings together loss management representatives of retail and manufacturing companies. This is an example of non-probability methods used in qualitative studies where a specific group of cases is selected for in-depth investigation that probability sampling cannot provide (Maxwell, 2013).

Whilst sustainability and CE practices were in the initial brief for the project, the topic was not foremost in the concerns expressed by participants. However, valuable insights emerged that address the research questions, and we were able to explore ideas with interviewees during the four in-depth investigations and in subsequent industry forums that validated our findings. We used a retroductive approach aimed at explaining structures and mechanisms in play, which as Blaikie and Priest (2019) observe requires 'disciplined scientific thinking aided by creative imagination, intuition and guesswork'. The knowledge elicited from our interviews and observations is viewed as objective but we recognise that the individuals and organisations that we engage with have imperfect and probabilistic knowledge of their own situations. In other words, we are careful to analyse what is opinion and perception, and what are objective fact (for example, a cage in which returns are stored is wrapped in plastic film would be the latter, whilst the views of individuals on the necessity or otherwise for the practice are more nuanced). This realist or post-positivist approach suits the investigative and explanatory nature of the work that we were asked to undertake.

By studying four major retailers, it was possible to compare practices and problems across the industry and both the structured interviews and feedback from the industry enabled us to 'triangulate' and validate our findings. We also presented the results in forums of loss managers and other retail managers to identify any concerns with the validity of the data. Media sources highlighting industry issues are also used to support some of the issues that we encountered. Our aim here is to use the different sources of data to construct a series of explanations of different issues relating to CE encountered across the retail industry as a result of the increase in items bought online and returned through different channels. Therefore, we look first at the barriers to implementation of CE (Section 5) and then at the opportunities for implementation (Section 6). This provides a basis on which we can evaluate in Section 7 the extent to which current theoretical assumptions in CE are supported by practice.

#### *Website reviews*

European retailers who offer customers a multi- or omnichannel shopping experience were identified. The websites of 100 retailers, across a wide spectrum of product categories (grocery, general merchandise, home electricals and electronics, toys, apparel, Do-it-Yourself, sports goods etc. - see Table 1), were reviewed for information on product returns, both the options offered to customers onscreen and their detailed returns policies. All reviewed companies are in Western Europe. Many of these companies are active in multiple European countries (sometimes under varying brand names), and for ease of access, their English language website versions were reviewed. Whilst these 100 websites do not form a statistical sample representative of the general population of retailers, it is a convenience sample that is sufficiently representative as it was presented to retailer forums for validation. The sample is likely to be skewed towards the kinds of companies that are represented in the forums detailed below (see paragraph on industry feedback).

Table 1: Companies whose returns policies were reviewed

Number of companies	Country	Retail sectors
65	United Kingdom	2 Jewellery 2 Handbags 1 Sunglasses 1 Toys 1 Electronics 2 White goods and electronics 4 Shoes 6 Clothing and shoes 1 Animal food and accessories 1 Clothing, shoes, household, toys, health and beauty 5 Health and beauty 3 Stationary, books, magazines, gifts 2 Clothing, household, small appliances 1 Clothing, household, groceries 3 Clothing, household 3 Groceries 11 Clothing 1 Furniture 2 Household 1 Furniture, household, toys 4 Do-it-yourself, household, garden 1 Household, hobby, electronics, furniture, clothing 1 Car accessories, bikes, hobby 4 Sports and leisure clothes, shoes, equipment 1 Brand merchandise 1 Clothing, shoes, household, health and beauty, electronics, jewellery 1 Baby clothing and equipment
5	Switzerland	1 Clothing, household 1 Clothing, household, groceries 1 Sports equipment and clothing



		1 Electronics and white goods 1 Household, garden and do-it-yourself
8	Germany	1 Clothing 1 Office supplies 3 Clothing, household 1 Electronics and white goods 2 Household, garden and do-it-yourself
9	Austria	1 Clothing 1 Groceries 1 Household 3 Groceries, household 1 Clothing, household, beauty 1 Electronics and white goods 1 Sports equipment and clothing
4	France	2 Clothing, household 2 Groceries, household, white goods, electronics
2	Belgium	1 Groceries 1 Clothing, household
3	Spain	1 Clothing, household, electronics 1 Groceries, household 1 Groceries, household, white goods, electronics
2	Luxembourg	1 Household electricals, electronics 1 Decorations
1	Denmark	1 Sports equipment and clothing
1	Portugal	1 Groceries, household, white goods

### *In-depth investigations*

We conducted four in-depth investigations. Each of the four companies retails a wide range of products, including groceries, clothing and household products such as home entertainment and small electrical goods, with annual sales ranging from Euros 11.8 to 55.3 billion in 2015/16. The focus is on the processes and management of the return of non-food products, as returns processes for food products are restricted due to the perishable nature of these food products. Table 2 shows company information as of the financial year 2015/16.

Table 2: Companies used in in-depth investigations

<b>Company</b>	<b>Sales</b>		<b>Number of stores</b>
1	€11.6 bn (£10.4)		468
2	€54.2 bn (£48.4)		6,902

3	€24.9 bn (£22.4)		626
4	€ 12.3bn (£11)		50 (+ 346 sister brand stores)

Data was collected through interviews (individual and group) with members of staff and management who had interactions with and/or responsibility for returns from the online business. Interviews typically lasted between 30 and 60 minutes and were digitally recorded; these records were subsequently transcribed prior to data analysis. A total of 25 people across the four companies, with responsibilities in finance, loss prevention, store and distribution centre management, were interviewed individually or in small groups. Each in-depth investigation involved a number of visits to stores, headquarters and distribution / returns centres, allowing for discussions about and observation of the returns process in store (as experienced by the customer, the sales staff and including the “back of shop” processes) and as goods are returned to distribution / returns centres for processing. Additionally, Company 2 provided information on the volume and costs associated with returns from internet sales, whilst Company 4 provided copies of process flows for the management of customer collections and returns of goods bought on the internet but collected and/or returned to store.

Questions included whether materials were being recycled, and if so, which ones, whether anything was being done to be more circular, what was happening to imperfect returned products, and whether anything was sent to landfill.

#### *Structured Interviews*

A second phase of research was undertaken to check the findings of the in-depth investigations across a broader range of companies, and further information was gathered. A structured interview guide was developed following analysis of the first three in-depth investigations and used to conduct 17 interviews (predominantly by telephone) with other European retailers, as detailed in Table 3. All of them are large companies with more than 250 members of staff and a turnover above €50M.

These interviews were not recorded, but written notes were taken by the interviewer. The participant organisations were again self-selected, with verbal consent for participation obtained prior to each interview.

Table 3: The interviewed companies, all of which have both physical stores as well as an online shop

Company number	Retail sector	Country	Number of stores
1	Health and beauty, perfume	International (person interviewed from Switzerland)	15,200
2	Clothing	United Kingdom, Ireland, Asia, the Middle East and Europe	350

3	Household, hobby, electronics, furniture, clothing	United Kingdom and Ireland	885
4	Stationary, books, magazines, gifts	United Kingdom	1300
5	Household, clothing, beauty	Switzerland	58
6	Household, beauty, hobby, small electricals	United Kingdom	413
7	Food wholesaler	Italy	?
8	Groceries	The Netherlands, Spain, USA	3206
9	Groceries, clothing, household	UK, Europe, Asia (person interviewed from Czech Republic)	6800
10	Groceries, clothing, household	United Kingdom	1415
11	Groceries, clothing, household	United Kingdom	633
12	Sports and leisure clothes, shoes, equipment	International (person interviewed from Italy)	1520
13	Sports clothing and sports shoes	United Kingdom	610
14	Car accessories, bikes, hobby	United Kingdom	465
15	Household, tools, do-it-yourself	International (person interviewed from Belgium)	12,200
16	Clothing	United Kingdom	400+
17	Brand merchandise	United Kingdom	387

### *Industry Feedback*

Subsequently, the validity and applicability of the findings across the industry was checked by gathering feedback from leading retailers, manufacturers, suppliers and couriers. This was possible through member participation sessions at [Redacted for review] Community meetings in February and June 2018 and the [Redacted for review] Forums Risk Summit in May 2018. Feedback was collected in the form of interactive surveys and from roundtable discussions.

Ideas and findings regarding sustainability, CE and links to CSR commitments were presented to the participating companies, but few companies could relate their current processes to sustainable and circular practices, reinforcing the need for research on this topic.

### *Data Analysis*

All in-depth interviews were transcribed and analysed thematically, using close reading and manual coding. The interviews were read together with additional notes made during site visits to shops, distribution centres and head offices (e.g. notes from observation of the returns processes). The first level of analysis consisted of mapping the specific process flows for the return of goods from internet sales as described by the members of each organisation. Subsequently the transcripts were scrutinised and separate documents compiled against themes concerning, for example, current practices and key vulnerabilities; information on cost of returns and performance metrics; current best practices and opportunities beyond these. As there were less than 30 interviews for thematic analysis, manual analysis was preferred over the use of computer aided qualitative data analysis techniques.

The structured questionnaire for the second phase of the research was developed following initial analysis of the first three in-depth investigations. Written notes from each interview were transcribed, and used to validate and build upon findings developed from the four in-depth investigations. Again, manual analysis was used to compare the findings from the interviews.

### *Limitations of the research*

As with other qualitative studies, we cannot claim that these results are generalisable across the entire industry. Our participant companies are predominantly large organisations, and the information gathered and results formed may not be fully applicable to smaller businesses. Furthermore, the organisations volunteered for the study and so are likely to be more alert to challenges with product returns than other companies. They may also already be managing their returns better than many others. Therefore, whilst results may not be experienced by all retailers, the companies involved in the in-depth investigations potentially offer more informed insight into the problems and vulnerabilities of product returns and current best practices within the industry. We provide empirical investigative data that is lacking in current literature.

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## **4 Alignment between CE theory and implementation in multichannel retail**

The manufacturers and retailers studied in the course of this research have not yet come to realise the importance of CE principles and sustainability in relation to product returns. Therefore, rarely any alignment between theory and practice could be identified. There are, however, retail companies that do implement CE principles. Many of them were founded within the last few years, are still small and cater to niche markets. Examples include:

- Freitag (bags)
- Patagonia (outdoors clothing)
- Thread International (textile fibres and packaging)

Large retailers and manufacturers that embrace CE principles currently often only do so for a small part of their business, such as:

- Fashion brands accepting textiles for recycling (H&M, M&S, Levi Strauss, etc.)
- Some lines of textiles or shoes made from recycled materials (Nike, Levi Strauss, etc.)

- Packaging of some product lines made from single, easily separable materials (Lidl, Tesco, etc.)

This indicates that whilst CE principles do work in practice, implementation is often slow to scale up. This may be due to the effort and reluctance to change things (e.g. replacing multilayer materials by single, easily recyclable materials) as well as the still limited acceptance by consumers (e.g. issues with the perception of product quality and appeal - new versus remanufactured; made from new versus recycled materials).

## **5 Barriers to CE implementation: The main causes of loss of available income and lack of sustainability**

Costs of returns for manufacturers are estimated between 9% and 15% of total revenue (Newcastle Systems, 2017). Estimates from the US give the cost of returns to both manufacturers and retailers as \$100 billion, in terms of lost sales, transportation, handling and disposal (Blanchard, 2007). Clear Returns estimate that returns cost UK retailers £60bn a year, £20bn of which is generated by online sales. As this proportion increases, so will the cost of returns (Ram, The FT, 27/1/16). Reducing these costs is a highly effective measure to increase profit for retailers without needing to increase sales. Manufacturers, in turn, will benefit when returns are reduced, as many have agreements to take back returned items. Often sustainability can be increased as well, and the following incidences of loss emerged from our research. The following practices were identified that pose risks for CSR commitments relating to CE concerns.

### 5.1 Jobbers

Jobbers are third party organisations that buy returned, obsolete or otherwise damaged goods in bulk and at low prices, to sell on through auction or other marketplaces.

One Loss Prevention Manager explains:

“(...) So then when it gets back to the fulfilment centre there’s certain things like electricals, we can send to the return centre, so microwaves, Hoovers, we’ll get our money back from supplier. If we don’t have a supplier returns agreement on them it then goes down the jobbing route (...) so when you think about £2 million lost in jobbing revenue that’s the full cost of how you adjust that off, we probably only got 15 – 20% of that back, that’s still a huge loss out of your business.”

Furthermore, the cost of testing and preparing goods for resale is high and some feel that jobbing is intuitively less expensive and less risky in the end:

“(...) jobbing is a non-malicious loss sort of thing, yes, where it’s a business necessity cos you’ve got to have an exit route, unless you’ve got your own eBay shop. Some eCommerce places, [other retailer] have it, so they have their online business, if you send something back that’s potentially been worn it won’t go back on their main website, it might go on their eBay website and they’ll get more money than a jobber would for it. We don’t have a [eBay outlet] (...)”

But as jobbers only pay pennies to the pound, retailers lose out unnecessarily. Some of the jobbed goods will then be sold on to secondary markets, others will be recycled or go to landfill. Retailers appear unaware of any details, and this is in contradiction with their CSR commitments regarding sustainability and transparency. Whilst companies may pride themselves on not sending any of their products to waste / landfill, they risk doing so through the hands of jobbers.

A published example of this issue relates to rule 96 of the John Lewis Partnership (JLP) constitution states: 'we expect suppliers to respect the law, employees and the environment'. However, Supply Management (May 2019) quotes Todd Bradley-Cole, partner and senior manager CSR procurement at JPL, discussing the qualification / requalification of suppliers: (...) [we have] "lots of suppliers but we didn't know if they were all complying with the law." Furthermore, referring to the case of bed maker Kozee Sleep, which supplied JLP, and whose owner was convicted of slavery offences in 2016: "There are people out there who we thought were recycling mattresses but they were going into a field somewhere."

Alternatives to jobbing that are better ecologically, economically and in alignment with CSR commitments exist, such as not sending items where only the packaging is damaged to jobbing or landfill. They require commitment at management level, for instance to arrange staff training and change contracts with third party operators of reverse distribution centres.

For example, one of the companies in the in-depth investigation told us about one intervention where the returns manager realised that sending products to jobbing or landfill was an easy, default action, that especially more casualised staff in third party logistics run distribution centres tended to take when deciding what to do with an item. The retailer was beginning to work with the third party to train staff to identify when an item was resellable at a discount, for example, and send them back to stores. Incentives to achieve more items returning to store at a higher recovery for income were being built into the target cost contract between the retailer and third party logistics company to achieve these goals.

## 5.2 Plastic films

Many products are individually wrapped in plastic film that is notoriously inefficient to recycle (technically feasible but not economical to do due to the low density of the material). Whilst this may make sense in the case of food due to hygiene and freshness conservation reasons (e.g. cucumbers (Dhall et al., 2012)), it seems less necessary in the case of clothing, bags and decoration items.

A related issue comes with the use of metal cages used for transporting goods between stores and warehouses. These return cages are typically open at the top and accommodate haphazardly inserted items of multiple types and sizes. Large quantities of plastic film are then wrapped around the return cages (or plastic film hoods pulled over them) to secure the items against theft or falling out accidentally.

## 5.3 Secondary markets seen as threats

The fear of secondary markets can lead to quite extreme measures such as the destruction of usable products. Lately, the Media have reported on multiple cases of famous brands destroying unsold products (BBC, 2018); companies involved include Amazon, Burberry, Richemont (owner of brands like Cartier, Montblanc, etc.), Louis Vuitton and Chanel (Bettadapura, 2018), and others. The destroyed products include obsolete (perfect) stock as well as returned goods in various conditions. The explanations for this strategy of destruction are that the brands wish to avoid deflation of their brand value; that out-of-season stock needs to be replaced with new stock; and that it is the most cost-effective way of dealing with obsolete or imperfect (returned) goods.

The burning of products is particularly problematic for Burberry, as the brand had joined Stella McCartney and Nike in the 'Make Fashion Circular' initiative that seeks to promote a 'zero waste' vision (Rogers, 2018). The public outrage at this waste of resources may lead to legal frameworks being changed over time, but it is currently a very common practice. Meanwhile, Burberry has promised to stop burning perfect stock and to stop using certain types of real fur, in another step towards improving its social and environmental credentials (Holton, 2018).

Dealing with returned products, a Store Section Manager explains:

"Well, if an item is faulty or damaged we then need to rectify that issue of the product when we take it back. So we need to press damaged or faulty [on the returns processing computer terminal] because it then prints out a second receipt, which we have to fill in, to either get the money back from that company (...), or sort of send it off to our NRC [National Returns Centre] to either adjust the price to, to clearance if it's still sellable, or if it's too brand damaging to be able to sell, we would then write off that stock."

Whilst the destruction of damaged stock is justifiable to some degree, perfect stock really should not go to waste. However, a manager responsible for loss prevention in e-commerce at a different company points out another problematic angle of secondary markets:

"Most of it goes jobbing, if there's items which can't be jobbed they'll then go to recycling and waste. So clothing goes to jobbing and they buy a palette container for pennies, same as clothing depots, and that goes to car boot sales. There's certain items which have to go overseas, branded (COMPANY) items, so like (BRAND), it's all (PARENT COMPANY) brand now, like TVs. So those TVs you can't job them to jobber to go to a car boot in the UK cos someone can then walk into a (COMPANY) store and say I've got a (BRAND) TV, I haven't got a receipt but it don't work, and it only comes from (COMPANY), so can I have a refund please? So for that, the instructions are: it gets jobbed overseas to Europe, yes the jobbing piece is quite big. But there's loss within it because they don't pay much for it."

## **6 Opportunities to implement CE principles**



From our findings, we identify opportunities for companies to improve on sustainability whilst capturing more profit. Reusing returned products and obsolete stock would lead to contingent economic and ecological benefits (French, 2008).

In some cases, the manufacturer of products is also the retailer; this makes it easier for CE opportunities to be implemented. When the manufacturer and retailer are different entities, both may make losses, and both have opportunities to benefit. Manufacturers may be contractually obliged to take back returned products, and hence have an interest in reducing this. In the absence of such contracts, it is mostly in the retailer's interest to improve the situation.

### 6.1 B2B stock online auctions - an alternative to jobbers

Most companies liquidate imperfect products or obsolete stock via a generic jobber who buys everything in bulk at very low cost. This strategy inevitably leads to value loss. A better option is the use of B2B online auctions, where goods are broken down into optimised batches targeted at a large audience of specialist buyers, hence maximising prices (Rosenberg, 2018). At the same time, more products get (re-)used and less go to landfill. An example of such a B2B online auction is bstock.com, where stock from John Lewis, Wayfair, Groupon and Amazon, for instance, is listed.

### 6.2 Covered cages and plastic packaging

Simple but effective improvements can be made in terms of equipment used for transporting returned items. Rather than cover cages with shrink-wrap or plastic hoods to prevent product theft, a safer and more sustainable alternative is to use return cages with metal cover and safety seal; no need for plastic wrap or hood. Investments in better cages for transportation between store and distribution centre were shown to pay off in our in-depth companies. Where plastics are harder to eliminate, companies should make sure to keep them pure / minimise contamination and collect them for recycling<sup>3</sup>. Single materials are easier to recycle and lead to purer secondary materials than mixed materials. Many stores and warehouses bale up cardboard for recycling, but few do it for plastics. Baling equipment is cheap, and by baling the recyclable plastic it can generate an income, as companies can sell the bales for recycling companies, as well as reducing waste to landfill.

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<sup>3</sup> As a side note, the current trend to favour the use of paper bags over plastic bags is only partially justifiable. Whilst both plastic bags and paper bags are recyclable, this often does not happen, and when plastic ends up in the environment, it can have very harmful effects, clogging waterways and killing marine life. Paper decomposes much faster and is far less problematic when left in the environment. Apart from this aspect, however, plastic scores much better than paper: it requires less energy for primary materials extraction, less processing, and is lighter and less voluminous hence requiring less energy for transportation, it is waterproof and will not rupture when wet. Overall, whatever material is chosen, the best solution is to reuse packaging like bags and fillers as many times as possible, moving away from the single-use culture.

### 6.3 The fear of market cannibalisation

Whilst there may be a strong argument for luxury brands to keep their products rare, an alternative to destruction could be debranding, or rebranding under a lower-rated label. This would create a source of income as well as avoid wasting valuable resources.

Non-luxury brands may not require rebranding, but would benefit from integrating the management of secondary markets into their competitive strategy<sup>4</sup>.

Oraiopoulos et al. (2012) explores the idea of using relicensing fees to regulate secondary markets, as they can be an important source of revenue for original equipment manufacturers (OEMs) if managed the right way. Furthermore, secondary markets can bring a competitive advantage and improve brand image, as companies that try to eliminate secondary markets have been severely criticised in the media. OEMs could refurbish used products at a comparably low cost, hence making them more attractive for the secondary market, and charge a relicensing fee to the buyers. Oraiopoulos et al. (2012) showed that a modest fee will both generate revenue for the OEM and increase the price that can be charged for the new product.

### 6.4 Circular economy concept

Strategic managers should work with designers, manufacturers, retailers, logistics enterprises and other companies to familiarise themselves with CE concepts.

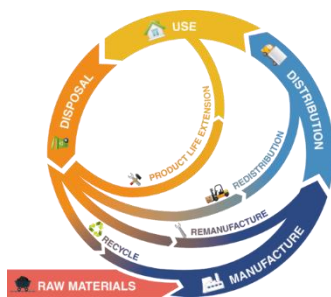


Figure 1: The original version (used with permission, courtesy of Tecnologie del Filo, Tecniche Nuove, Milano)

Figure 1 depicts a diagram for circularity in manufacturing, showing the flow of materials from their source to manufacturing, distribution, use and (potential) disposal - from where products could take several different paths to go back into the circle of usefulness. The most direct way is product life extension, which means that a product goes back to being used, potentially after a quick repair. Alternatively, the product could reach a secondary market via

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<sup>4</sup> Ghose et al. (2006) found that only 16% of customers buying a used book might have purchased a new one had the used version not been available. All others would simply not have bought anything, and the economy would have missed out on positive side effects: "Our estimates suggest that this increase in book readership from Amazon's used-book marketplace increases consumer surplus by approximately \$67.21 million annually. This increase in consumer surplus, together with an estimated \$45.05 million loss in publisher welfare and a \$65.76 million increase in Amazon's profits, leads to an increase in total welfare to society of approximately \$87.92 million annually from the introduction of used-book markets at Amazon."

redistribution. A product that needs more serious intervention like updating, upgrading, refurbishing or remanufacturing may go back to the manufacturer (or a third party) for this. Finally, products that are beyond these options, can be disassembled as required and the materials recycled, which then again can feed into the needs of manufacturing companies.

This diagram was used as a basis for the adapted version shown in Figure 2, applying the concepts to product returns in retail and how products may return to use. The length of the (potential) use phase can vary: it may not happen at all, or it may consist of the customer trying out a product and returning it immediately due to a change of mind or a defect. It could also consist of the customer using the product for a while and returning it afterwards, potentially because a problem occurred or because the customer does not want it any more ('wardrobing' / illegitimate 'hire' as discussed in [redacted for review]). Five internal circular streams were identified: 1) donation of products, which may bring them directly back to use; 2) back to the shelf, which returns products directly back to sales; 3) selling products to a secondary market, possibly via a targeted online-auction to maximise the sales price; 4) products may be repackaged or refurbished and then go back into the distribution system; and 5) they may be remanufactured, which returns them to the manufacturing stage at the original factory or a third party.

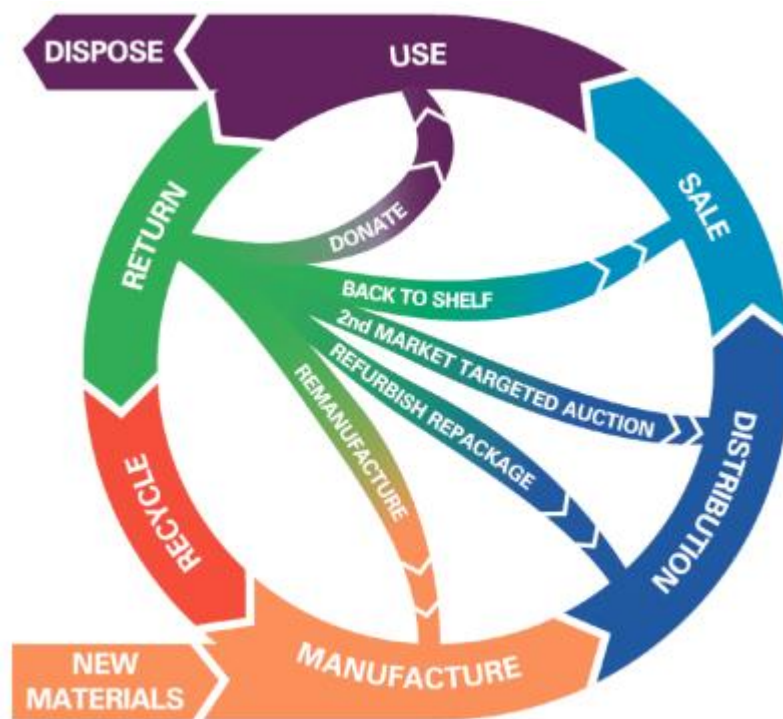


Figure 2: The circular concept in the case of retail product returns

Besides the circular options, other ways for retailers and manufacturers to become more sustainable, include:

- Reducing their carbon footprint
- Reducing water consumption (e.g. collection of rainwater) and local water recycling
- Capturing and reusing excess heat
- Using sustainable, fair-trade suppliers and making long-term contracts with

guaranteed purchases (rather than deciding where to buy last-minute, as it is common practice)

- Avoiding or systematically recycling plastics at every stage, including production, logistics, sales and taking them back from consumers
- Eliminating / reducing pesticides and other toxins

An excellent example of circular processes is the arrangement of companies into industrial ecoparks, such as demonstrated by the town of Kalundborg and many others. What one company outputs as by-products and waste will often become a valuable input for another company (Perey et al., 2018). This requires either for companies with complementary needs to happen to be close to each other, or for long-term strategic plans to be made.

## 6.5 Exploring circular options

The following ideas are not directly derived from the research; they came up in discussions and brainstorming sessions with suppliers and interested colleagues, and may be helpful for establishing circular flows for returned products.

- *Direct resale with or without repackaging / refurbishing: brand-owned online or offline platform*

Used / imperfect / out-of-season products can be sold to a secondary market. A simple way of doing this is in store, at a discounted price. Products could be placed on a special shelf available to all customers, or in a staff-only shop. Alternatively, products can be sold online via generic selling platforms; some companies provide a brand-owned online platform for customers. Similarly, a company-run app could be created for consumers to engage with each other directly, selling or exchanging products or components / spare parts, and shipping them directly rather than via a company warehouse. The company providing the app could either charge an app membership fee, or a charge per transaction, or could provide the service for free with the advantage of increasingly binding customers to their brand.

Another example are car brands that allow their dealers to sell “manufacturer approved” used cars with 12 months warranty. An increasing number of customers choose this as their preferred option<sup>5</sup>, and the concept could very well be applied to other devices such as washing machines, computers, etc.

Depending on the condition of the item, companies may decide to leave it as it is, replace the packaging, do some slight retouches to the product (refurbishing), or make repairs. In our in-depth company 2, for instance, store staff will make small repairs like fixing a loose button or seam themselves in store.

- *Remanufacturing: manufacturers, retailers, 3rd party network backed by brand*

For items that need more serious work to be sellable again, companies could engage in

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<sup>5</sup> [https://www.honestjohn.co.uk/buy\\_sell/buying-approved-used/](https://www.honestjohn.co.uk/buy_sell/buying-approved-used/)

remanufacturing products themselves or partnering with organisations that do. Remanufacturing may be performed by manufacturers, retailers, or a 3rd party network that is ideally backed by the brand. Our in-depth company 3 has a bike mechanic working in their returns distribution centre, investigating returned bikes for their condition, assembling / disassembling them and executing repairs where needed, allowing the company to resell the bike at full or reduced price. Especially in the automotive industry, it is common that 3rd party manufacturers are either contracted or authorised by the original manufacturer to remanufacture components (Zou et al., 2016).

- *Redesigning products for easy disassembly and reuse of parts*

Redesigning / encouraging manufacturers to redesign their products for easy disassembly, repair, recycling is a very important and effective strategy that requires time to implement. Products should also be designed such that different materials can be separated easily for recycling. For example, Lidl has redesigned some of their sandwich packaging such that the cardboard exterior can easily be separated from the plastic film inside. Similarly, textiles made from a single material are easier to recycle than those made from mixed fibres. As an example, Teemill<sup>6</sup> run a circular fashion business with a closed loop, also offering their services to other brands.

#### 6.6 Gathering feedback from product returns for future decisions

Over 20 years ago, Barlow and Moller (1996) suggested to see customer feedback, usually received in the form of a complaint, as a strategic tool to continuously improve customer service and product quality. One company interviewed in this project confirmed that they use this approach on customer feedback related to returns, to make better purchasing decisions in the future and to ensure that products are represented accurately in advertisements. However, the approach it seems not to have spread widely yet.

It is more common for manufacturers to improve product design based on customer feedback, although there is still considerable potential for improvement (Fabijan et al., 2015). Anecdotal evidence suggests that in the aerospace industry, product wear&tear is analysed upon disassembly at the end-of-life to improve future product design.

Retailers and manufacturers should share information on product returns. If retailers notice that a certain product is often returned because of a weakness in a certain component, they should communicate this to the manufacturers, for them to improve the product design or manufacturing method. Equally, returns should be considered part of the customer decision making process rather than a separate aspect. Companies should work with the returns to improve selection of future products or to inform the customer of the issues that have been raised on existing products and provide solutions to these issues in order to convert possible returns into successful sales.

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<sup>6</sup> <https://teemill.com/circular-fashion>

This all links to the concept of product life cycle management, where Nilsson-Linden et al. (2019) argue that this should not only be practiced company-internally, but across all involved companies in a supply chain (or 'product chain').

## **7 Theoretical and managerial implications: Reverse supply chain optimisation**

From the data, it became clear that reverse logistics for online sales are often fragmented and are the result of different processes and systems being linked inefficiently due to the speed at which companies feel obliged to keep up with the demand for free returns through multiple channels from consumers and competition from suppliers. Many companies could improve their overall reverse logistics by considering strategies drawn from analysis of the buy online return in store problems they face. The following suggestions arose from our investigation.

- *Transporting only when unavoidable; keep in store*

Reverse logistics need to be organised such that items are only transported when it is unavoidable. Several companies explained that stores may lack systems that allow them to put products on sale (e.g. appropriate bar codes) or a logical space in store to display these goods. However, with minimal investment, stores could set up a dedicated space for selling imperfect, used/returned and repaired items to consumers or employees. Shipping all items to a Returns Distribution Centre (RDC) as the easy default increases cost and adds unnecessary delays before a product can be resold, with the additional dangers of damage or theft, or obsolescence.

- *Using return agreements with suppliers when available*

Different types of supply chain contracts exist (Guo et al., 2017). Where return agreements with suppliers / manufacturers are in place, the systems need to be configured such that these options are easily accessible, and staff need to be trained to actually use them consistently.

- *Integrating IT systems for smoother data transfer and overview*

It is often necessary to integrate IT systems for smoother data transfer and for staff to get an overview of what is happening. An alternative is to use a software solution that turns disparate data from distributed systems into standard formats at a central point for the generation of business information (Jeacle, 2015; Ali et al., 2017). This also allows for planning ahead and routing items better.

- *Less options are better*

More choice (of anything) is not always better when buying goods; lots of choice has been shown to create confusion and lack of satisfaction (Schwartz, 2006). This principle originates from the "paradox of choice" (Schwartz, 2004), and has been applied to many different areas of life, including health and online searches. In analogy, returns options should be expected to be no different. Companies may find it beneficial to restrict people's return options to the

most popular / ecological (and/or cost effective), thereby reducing complexity and increasing efficiency.

- *Inviting customer honesty for better supply chain decision making*

Customers making online purchases could be given the opportunity to be more honest about their intentions, such as buying the same item in various colours or sizes with the intention to keep only one. With this additional information, the system could then make suggestions such as arranging delivery to a store with the possibility to return the unwanted items immediately, and possibly without the customer's card even being charged for those returned. The additional information could also be used to improve company-internal planning and inventory control, avoiding wrong information being transmitted (when scaled up, one item being sold or procured, rather than five, makes a significant difference in regulating supply in response to demand (Kaipia et al., 2017)).

- *Giving customers sustainability information*

Customers could be given information about the sustainability of each delivery (and/or returns) option, thereby influencing their decision-making. This would enable customers to make an informed choice on picking an option that might be more convenient for them but less efficient, or one that might be more environmentally-friendly but less convenient for themselves.

For instance, online shopping delivery specialist Ocado displays a green van symbol for delivery slots where the delivery van is scheduled to be in the customer's neighbourhood anyway, enticing them to book a slot with smaller environmental impact. It would be interesting to explore how far customers are willing to pay more for more sustainable shipping options. An example of such practice is the carbon-offset charge offered when booking flights (Jou and Chen, 2015). Engaging partners along the whole value chain, and sharing sustainability information with them, is of strategic importance for tackling climate change (Dahlmann and Röhrich, 2019).

## **8 Discussion and conclusion**

The findings show that current practice in retail returns is not yet in line with existing theories and models of CE. Furthermore, many companies seem unaware of the importance of product returns to the bottom line or their relevance to CSR commitments. Processes are not streamlined or well-coordinated. Very few appear to have implemented strategies concerned with sustainability and circular economy concepts related to returns.

Theoretically, companies may decide to implement CE principles to gain competitive advantage (Fowler and Hope, 2007) as well as to achieve good corporate governance, which often includes dealing with trade-offs between conflicting goals of economic, ecological and social nature (Hahn et al., 2010). Strategic management plays a crucial role in this. To combine sustainability, loss prevention and profit optimisation, a strategic plan

with commitment from high level management is necessary. The plan then needs to be implemented on strategic and operational level. Strategic oversight and responsibility at board level is needed to ensure that the right policies are created. Suitable strategies would ensure companies take responsibility for both their forward and reverse supply chains, following through where their products come from when they are sourced and where they go to when they are no longer desired. Returns processes would need to be strategically monitored for performance and sustainability.

Implementation of CE and sustainability appears difficult for companies, due to several vulnerabilities, barriers and challenges. The most important concern is that companies make Corporate Social Responsibility commitments but have not yet thought through how returns, particularly from online sales, might be dealt with throughout the supply chain. This is most evident in the lack of knowledge on what jobbers do with goods, and how this potentially conflicts with CSR commitments to zero landfill. This is a similar issue to the upstream responsibility brands carry for the conditions under which their suppliers produce garments (Börjeson and Boström, 2018), although at the other end of the supply chain - downstream. Consumers demand more transparency about product life-cycles (e.g. modern slavery issue) and therefore it is risky for companies to divert responsibility for returned and obsolete products onto a third party like a jobber.

Strategic managers in several of the companies interviewed appear to have little responsibility for, or oversight of, the returns process. It tends to get delegated to the loss prevention function. However, if returned items were to be seen as an asset rather than simply a 'cost of doing business', then the potential for increasing net margin by maximising income from sales of returned goods would drive strategic plans to improve reverse supply chains and optimise income generating opportunities compatible with CE and CSR commitments. It should also drive strategic aims to integrate information technology or find alternative information technology solutions to better identify contingent losses and opportunities. This would allow the organisation to optimise returns processes, ensure value is conserved, and select the best exit routes for returned products.

Examples of vulnerabilities found in retail companies include the blind delegation of returns to jobbers; the unnecessary use of plastic films; and the fundamental issue of perceiving secondary markets as cannibalisation threats. Suggested improvements range from simple ideas like using metal grid covered return cages - which are both more secure against theft and do not require any single-use plastic films - to addressing more fundamental issues like the fear of secondary markets and engaging in the Circular Economy by thinking about more sustainable exit routes for returned products. These can include targeted B2B online auctions as well as ways to steer secondary markets whilst making profits rather than trying to eliminate them. Furthermore, reverse supply chains can be optimised via various mechanisms including working with suppliers on return agreements and training warehouse staff to use them properly; integrating IT systems for better decision-making, for instance about what to do with which returned product; offering less returns routes to customers whilst indicating the sustainability and incurred cost of each option, and alternative business models that encourage customers to be more honest about their intentions with products they order.



This article goes beyond others by providing empirical data on the growing problem of returns from online sales, showing clearly that this is a strategic as well as an operational issue and suggesting ways for strategic management to steer companies through the inevitable transition towards more sustainable business.

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