



Circular fashion: Making resale a reality

March 2024



Introduction

Many brands within the fashion industry continue to struggle to tackle their adverse environmental footprint – be it carbon or waste. At its core, the challenge for the industry is how to decouple consumer demand for clothing from raw material extraction. Scaling circular models (e.g. repair, resale and recycling) offers the way forward for the industry but significant uncertainty persists as to which models deliver the best outcomes, and how, and for whom, these models can continue to deliver profits.

We find that resale models tend to deliver substantially improved environmental outcomes versus increased recycling, which is the case across 90% of scenarios we modelled for different displacement rates and recycled material content, but delivering profit from them can be challenging.

Our research reveals that on average c.25-40% of an item's selling price is retained when it is sold in the secondary market, with substantial variation driven by sales channel and product brand. With estimated resale costs of at least £5-7 per item for channels outside of charity stores, this degree of value retention limits the items from which resale models can drive profit. This results in a clear sub-segmentation of the current UK fashion market into brands that are likely to profit from resale, and those that are not. Premium and luxury brands with a higher price point command a higher degree of value retention, making resale profitable for them, while more affordable and high-street brands face a greater challenge to attract sufficient value to meet the costs of resale.

However, the current economics of resale are not fixed, and fashion businesses can take a number of specific actions to improve resale profitability, such as enhancing the customer proposition with added value services, focusing on reducing the cost of labour in the secondary value chain, and improving the quality and durability of their products. Changing the economics of resale will accelerate growth in the secondary fashion market and support the necessary scaling of circular models.



01

Can fashion be environmentally friendly?

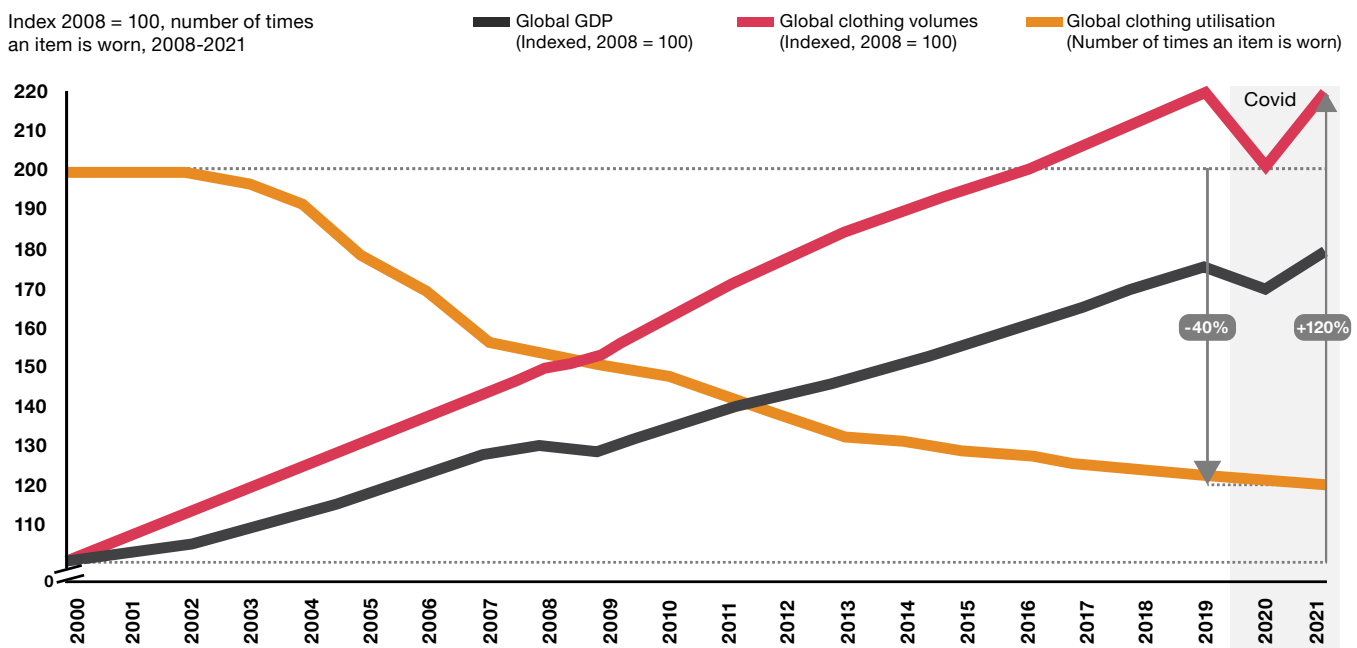


The environmental challenge for UK fashion

Globally, the fashion industry is responsible for producing c.5% of total GHG emissions (Business of Fashion),¹ making it the third highest emitting industry behind food and construction. The predominant linear model in fashion of 'take, make, use and dispose' is resource-intensive and generates a large amount of waste, produced both throughout the supply chain and at the 'end of life' of a product. More than 70% of discarded fashion items end up in landfill or are incinerated.²

The adverse environmental impact of the industry is only accelerating as people continue to buy more clothes and wear them less, exacerbated in part by the increasingly short production cycles of 'fast fashion'. Over the last 20 years, clothing utilisation has dropped by almost 40%, while total production has doubled and grown ahead of GDP.

Global growth of clothing volumes and decline in clothing utilisation



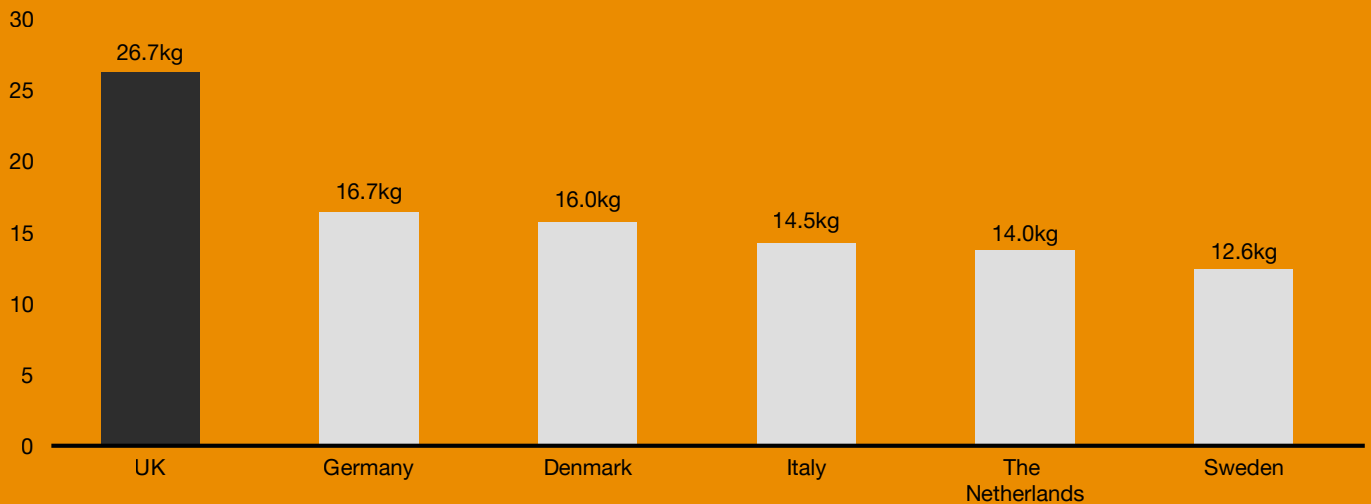
Notes: Utilisation refers to the number of times a piece of clothing is used before it is discarded including reuse. 2016-2020 values for clothing utilisation are based on linear regression between 2015 and 2021 volumes based off Euromonitor data, 2000-08 volumes are based off linear regression given clothing volumes doubled 2000-2016. Source: World Bank, Euromonitor, ECAP, Ellen MacArthur Foundation, McKinsey, Strategy& Analysis

¹ Source: World Economic Forum 'Net-Zero Challenge: The supply chain opportunity'.

² Source: Ellen MacArthur Foundation 'A New Textiles Economy: Redesigning fashion's future'

The UK is one of the world's worst offenders for overconsumption of clothing.

In the UK, 26.7kg of textiles were consumed per capita in 2019, more than other European countries: Germany (16.7kg), Denmark (16.0kg), Italy (14.5kg), the Netherlands (14.0kg), and Sweden (12.6kg) UK Parliament, 2019).



Source: UK Parliament, 2019

26.7 kg is the equivalent to approximately:



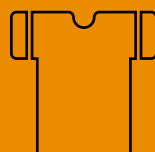
38

Pairs of jeans
(Men's)



53

Cotton jumpers
(Women's)



107

T-shirts
(Men's)



67

Trousers
(Women's)



411

Pairs of socks

This overproduction and overconsumption of clothing magnifies fashion's environmental problem. While progress is required on a number of fronts – the increased use of sustainably sourced raw materials, and improved end-of-life treatment as two examples – arguably the primary mechanism for the fashion industry to tackle this problem is the introduction and scaling of circular business models such as the repair, resale, and recycling of existing products.

70% of the industry's emissions are produced upstream: 40% during raw material extraction and 30% during production. As a result, decoupling demand for clothing from the consumption of virgin raw materials is essential in both reducing emissions and waste generated by the industry. This can be achieved by extending the lifetime of items by introducing and scaling more circular business models.

A range of regulatory, consumer and competitive pressures are driving fashion businesses to increase the circularity of their business models, with most mainstream brands having already adopted either specific targets on reuse / recycling rates or specific initiatives to boost these. However, the costs of adapting to more circular models and concerns about the incrementality of resale, mean that meaningful progress to date has been relatively limited and the level of clothing production and consumption continues to rise.

Most targets from fashion brands focus on increasing the recycling of used products and increasing the proportion of recycled fibre content in new products rather than displacing volumes of new items through the adoption of models of reuse. A focus on recycling over reuse creates less disruption to established business models within the industry, and avoids much of the environmental damage associated with raw material extraction, but does not reduce the volume of product manufacturing required for clothing.





02

How does reuse stack up against recycling?

How does reuse stack up against recycling?

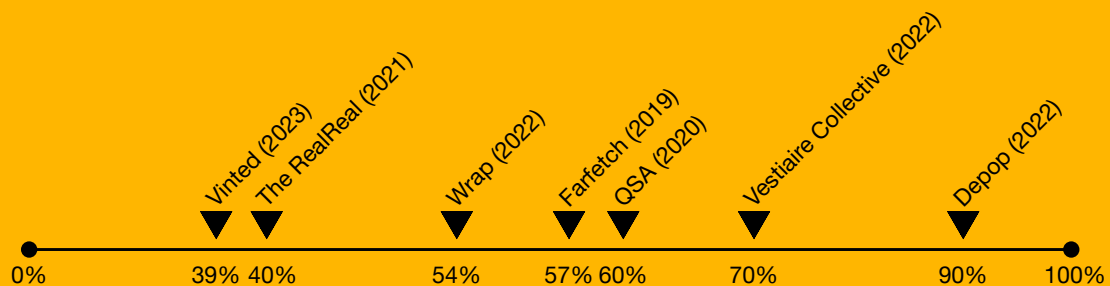
Reuse and recycling have both been proven to reduce the environmental impact of fashion by extending the life of garments and avoiding reliance on virgin materials. There have been a number of LCA (Life Cycle Assessment) studies published in recent years, many of which consider reuse to produce superior outcomes to recycling. A report by the European Commission in 2020 estimated that reusing a cotton t-shirt would reduce carbon emissions by 60% vs. a virgin equivalent, compared to recycling, which only reduces emissions by 5%.

However, variables and assumptions vary widely across studies, significantly altering outcomes. For reuse, there are wide disparities with displacement rates. For recycling, the proportion of recycled fibres used in new garments varied greatly.

Reuse: Displacement rate

- Definition: the proportion of second-hand purchases that displaces what would have otherwise been a purchase of a new item, including the potentially reduced number of wears of a reused garment.
- There is significant variation in reported displacement across studies, with rates ranging from 39% (Vinted) to 90% (Depop).

60%
(Average of sources)



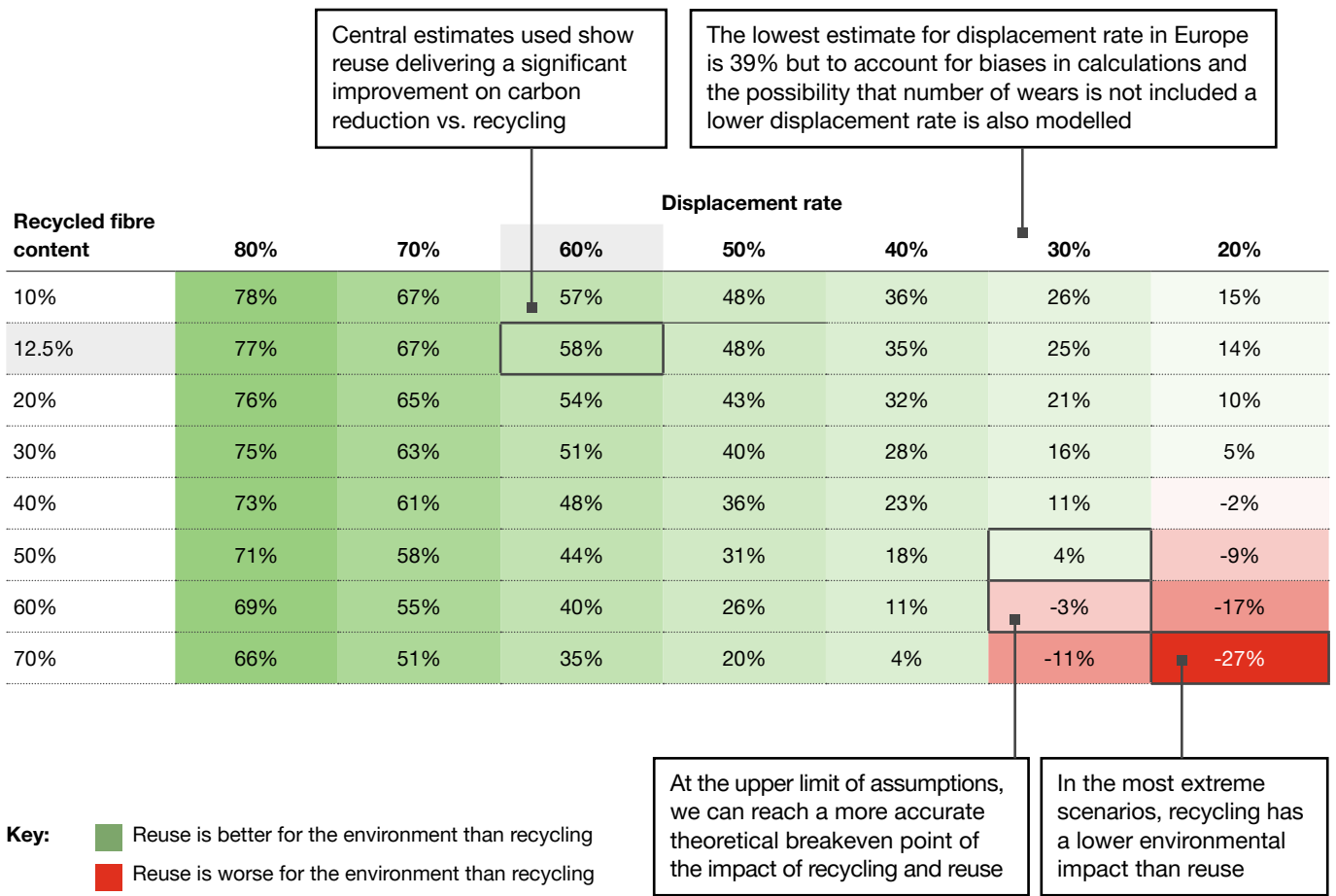
Recycling: The proportion of total fibres which are 'recycled' fibres used in new garments

- As a result of material degradation and material loss during the recycling process, there is a limit to the proportion of recycled fibres that can be used to create a new garment and ultimately displace the use of virgin fibres. Additionally, many textiles (e.g. polyester-cotton) are not suitable for fibre to fibre recycling processes.
- Today, less than 1% of fibres are recycled, and estimates of a potential ceiling on the potential proportion of recycled fibres that could displace virgin materials vary significantly.

Despite the wide variation in input assumptions across studies, sensitivity analysis which we have conducted across key variables demonstrates that in most circumstances models of reuse in fashion deliver a preferable environmental outcome to recycling – potentially up to ten times the carbon reduction.

Environmental impact of reuse and recycling for a cotton t-shirt

% difference of environmental impact (Kg CO²) of reuse vs. recycled, 2020



This analysis supports the conclusion that where possible, models of reuse should be prioritised as a circular model for fashion over recycling. To date however, the environmental advantages of models of reuse have not fully outweighed the concerns of many within the fashion industry that introducing and scaling models of reuse will dilute profits.



03

Can resale be economically viable?

Economic viability of models of resale within fashion

Increasing resale in fashion can be achieved through a range of different business models that aim to extend the lifespan and value of clothing. These can be broadly classified into five categories which can be adopted as a stand-alone or hybrid business model:



01

Third-party resellers

Businesses which acquire (or receive) used items, curate these items and sell them to consumers. These businesses typically own stock

Channel:

Hybrid

Example companies:

Shelter
Oxfam



02

Peer to peer

Marketplaces connect buyers and sellers of used items. Typically these businesses do not own stock

Online

Vestiaire Collective
Ebay
Depop
Vinted



03

Takeback schemes

Original brands / retailers that develop or outsource resale capabilities, allowing consumers to buy used items and / or redeem used clothes against new purchases

Hybrid

Zara pre-owned
John Lewis
FashionCycle



04

Rental models: on demand

Businesses which offer one-off rental arrangements of clothing items for consumers. Varied approaches taken to ownership of stock

Hybrid

HURR
My Wardrobe
By Rotation
Rent the Runway



05

Rental models: subscription

Businesses which offer subscription-based schemes allowing for temporary product ownership, with rotation of items over time

Online

Nuuly
Vivrelle

We expect resale through third-party resellers, peer-to-peer platforms or by retailers to become the predominant models of resale in fashion in the short-medium term. While rental and subscription models offer alternative models for extending the usage of items, adoption of these models is currently more nascent amongst consumers.

One of the key barriers to the scaling of resale to date and unlocking the improved environmental outcomes of a reuse model is sufficient certainty on the economic viability of the possible business models. Our work has investigated which levers influence overall viability and attractiveness, through a review of both resale price drivers and reselling costs:

- **Resale products' value retention:**
What revenue is a brand able to achieve through resale? What are consumers willing to pay for second-hand items and what factors influence this?
- **Resale costs:**
What costs will a brand incur through resale?



A. Resale products' value retention

We analysed the retained value of second-hand fashion items by reviewing the resale value of over 20 items (across brands and product categories) across different resale channels (over 500 data-points in total). While there is significant variation across items, most items generally retain c.25-40% of their initial retail selling price when sold again on the secondary market. Our analysis highlighted three primary drivers of variation in the degree of value retention:

01

Initial RSP (retail sales price)

Clothes with a lower RSP will often retain a higher proportion of value as the minimum viable price point (breakeven) at which they can be sold is a reasonable proportion of their initial RSP.

02

Channel

Value-add resale channels (e.g. those which offer authentication and merchandising services) command a significant premium in terms of value retention. Value can be created if consumer pain points are addressed.

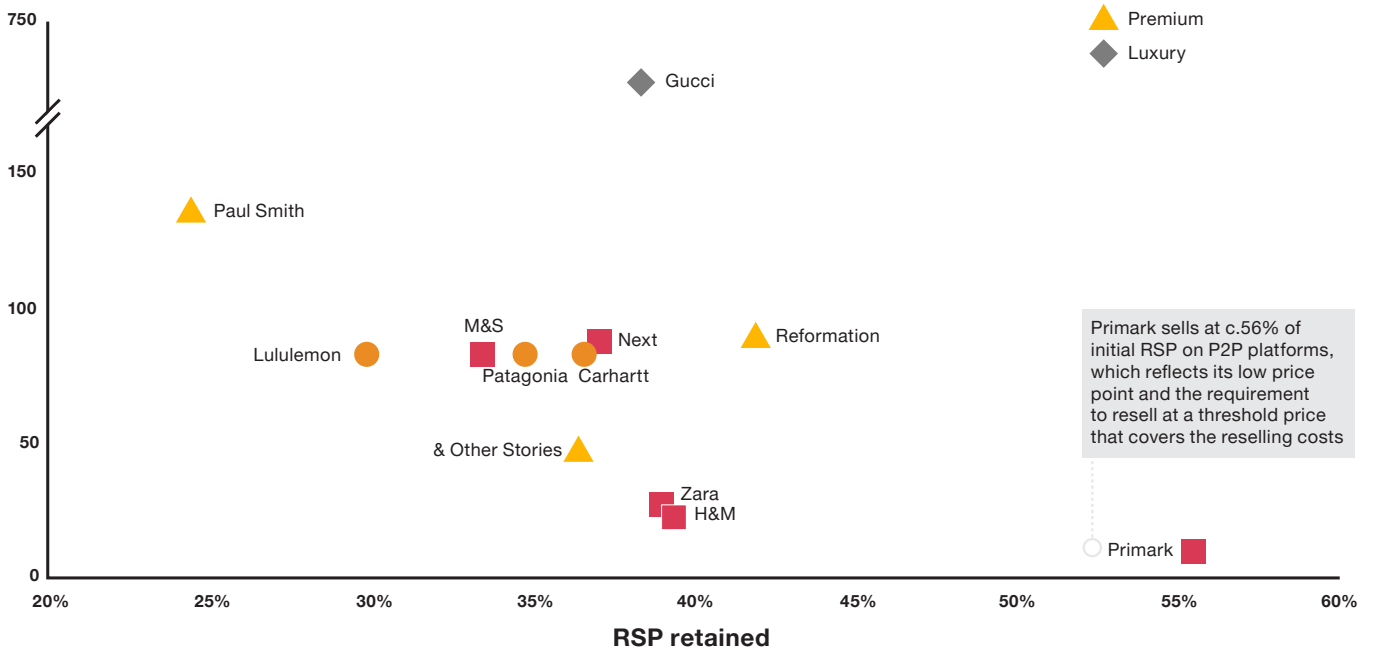
03

Brand

Notwithstanding these two factors, premium brands which are in high demand and associated with higher quality clothing are able to retain a higher proportion of value.

RSP and % RSP retained when resold through P2P platforms

£ & % RSP retained, 2023

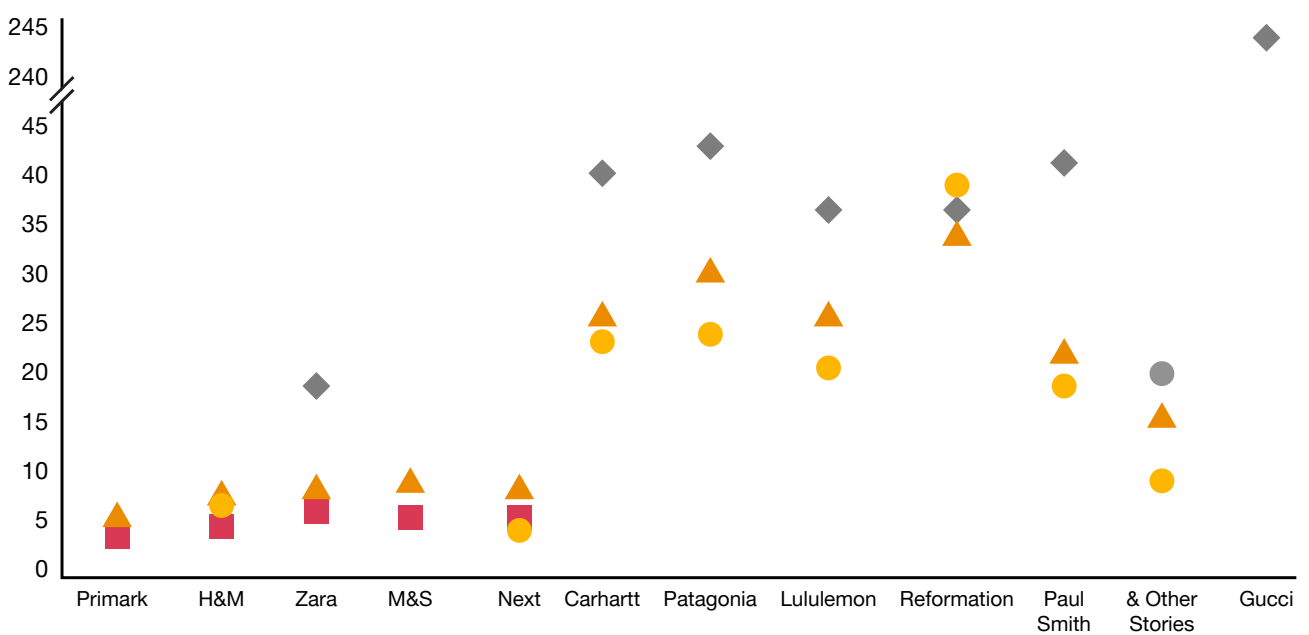


Source: A team of PwC analysts manually collated the datapoints of like-for-like products across each resale website. The team also visited over 10 charity shops in the Croydon / Bromley area.



Average resale value across resale channels, by brand
£, 2023

Charity shops ▲ Depop ● Ebay ◆ Vestiaire



B. Resale costs

Resale businesses have a range of costs which traditional fashion businesses do not: second-hand product sourcing and acquisition, reverse logistics, sorting and quality control, storage, and authentication and repair. However, various cost lines do not apply to every resale model (e.g. charity shops do not have acquisition, verification or (significant) reverse logistics costs).

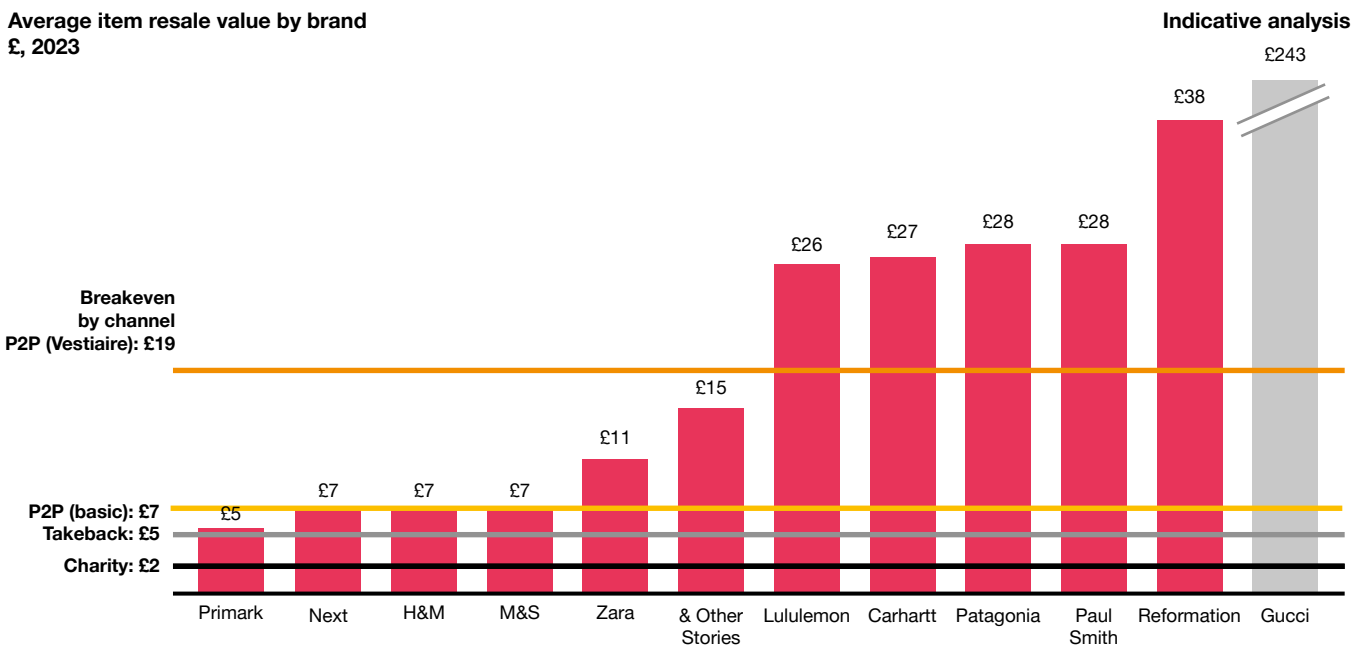
Developing accurate estimates of these costs is complex and there can be significant variation depending on how each activity is performed as well as the characteristics of individual items (e.g. size, weight, etc.). However, we have developed an indicative estimate by assessing the cost of each individual activity by type of resale model. While certain key costs are available from public sources (e.g. charity shop annual reports, resale platform listing fees, etc.), others have been estimated based on interviews with industry experts and our experience working with businesses across the value chain.

Although indicative, this exercise demonstrated that different resale channels are able to operate with fundamentally different economics because of varying cost lines. Despite these differences, labour costs are the primary contributor to total costs across most resale models. This labour intensity is therefore a key challenge for the economics of resale more widely.

We estimate that costs are as low as £1 per item in charity shops (where most activities are performed by volunteers) and can be as high as c.£20 per item on premium resale platforms. For most branded resale platforms, we estimate costs to be in the region of c.£5-7 per item.

Although indicative, the challenge of making resale an attractive alternative business model is clear. Higher-priced, luxury items have much more attractive resale characteristics as the resale value still far exceeds the costs of resale, and there is potential to achieve even more attractive margins than the initial sale. However, products with lower initial price points can be challenging to resell profitably.

Average item resale value by brand
£, 2023





04

How can UK fashion
make resale models
work profitably?

There is currently a clear sub-segmentation of the UK fashion market into brands able to benefit economically from resale, and those who are not...

There is a base level of costs incurred in resale, irrespective of channel, which effectively sets a minimum hurdle for the price of an item on the secondary market which must be achieved in order for a resale model to be economically viable. This price point is variable based on the specific processes undertaken in the reverse value chain but is in the region of £5-7.

Given an average price point of clothing in the UK of c.£20 (with significant variation by category), even a high degree of value retention will make profitable resale challenging for certain segments of the market.

Brands with a more premium price positioning are able to command a high retention of value and make the economics of resale work for them irrespective of platform (e.g. in-house takeback or a value-add authentication / repair offering). In many cases there is significant potential for these brands to capture incremental value from the secondary market – either directly via their own offerings or indirectly through partnerships with other platforms. Given slowing growth for the wider luxury apparel market, capturing value in the secondary market may present an opportunity to bolster growth.

In contrast, more affordable / high-street brands do not typically have either a sufficiently high initial price point or degree of value retention to make resale profitable for them as a business model. In many instances it is only the charity store channel, with a structurally lower cost base, which is able to realise any 'profit' on these items.

Increasingly, resale channel operators themselves are making a distinction on what types of item can and can't be profitable for them and focus their sales on those which can (e.g. Vestiaire Collective banned items from 'fast fashion' brands from being listed on their platform in November 2023).

Of course there are a variety of different objectives outside of direct profit which brands may be seeking to achieve by entering resale, including enhancing brand reputation or growing share of wallet. However, for resale to truly scale within a brand, it is likely it will need to be able to deliver profit in its own right. Given this, there is an emerging sub-segmentation of the UK fashion market into products and brands that are likely to scale any resale operation, and those which are unlikely to.



...however, the current economics of resale are evolving, with fashion businesses themselves able to take a number of actions to help change this equation and increase resale profitability

01

Increasing the retention of value in the secondary market through sales channels that add value to consumers

- Resale channels which added value for consumers through services such as product authentication, product repair, and curation of a range command up to 5 times the degree of value retention observed in more simplistic resale channels (e.g. simple P2P platforms or charity stores) for similar items
- This demonstrates the substantial premium which consumers place on channels within the secondary market that are able to address their core concerns with second-hand clothing such as product authenticity, product quality, and convenience/ease of purchase
- Whilst many mainstream brands have established resale propositions in the last couple of years (e.g. H&M, Shein), these propositions are typically branded P2P platforms which offer some added value such as visual merchandising services. As such, they are unlikely to have realised the full value retention potential possible in the secondary market
- Further development of added value resale propositions for consumers is likely to i) support higher levels of revenue in the clothing resale market; and ii) support consumer acceptance of resold clothing

02

Cost optimisation in the reverse supply chain, notably on labour costs

- To make the economics of resale more attractive across a wider range of price points, costs within the secondary value chain such as those of reverse logistics, sorting, quality control, and storage will need to be reduced over time
- In particular, the highly labour-intensive nature of the reverse supply chain in clothing today and its inherent location 'onshore' mean that labour costs typically account for over 50% of the cost of resold clothing
- Fixed costs across the value chain such as platform operation costs, capital investments in reverse logistics and storage space are likely to reduce over time. As the clothing resale market grows and achieves greater scale. But for others there will likely need to be actions to structurally lower the cost base
- Technological innovation in particular offers significant promise to augment labour activities in the secondary value chain and reduce the amount of effort required per item. For example, the incorporation of established technologies such as RFID (Radio-Frequency Identification) tags, flexible integrated circuit chips, and QR codes into clothing all offer the potential for rapid and reliable sorting and authentication of products
- Many of these innovations are already likely to be incorporated into clothing to comply with upcoming EU Digital Product Passport regulations (expected by 2030). Leveraging this to improve efficiency in the secondary value chain can quickly help to support more attractive economics for resale

03

Shifting product mix away from the 'fastest' items

- Whilst the channel and cost optimisation above can go some way towards making resale more economically attractive for clothing brands, they are unlikely to be able to move the dial substantially enough for the very cheapest items of clothing on the market today
- This reality is part of the overarching sustainability challenge within the fashion industry which is the overproduction and overconsumption of cheap fast-fashion items
- Addressing this challenge will not only help support resale economics but will also unlock the ability to meaningfully reduce emissions
- Tackling this is likely to require a wider shift in the market away from cheaper, microtrend-led items driving volume growth towards items focused on durability and timeless styles
- Realising this shift away from volume-led growth will require change across functions within fashion businesses, and importantly, from consumers themselves



Overall conclusions

A more circular value chain within fashion helps tackle the industry's growing and varied environmental challenges (climate change, biodiversity loss, pollution and waste). Decoupling consumer demand from raw material extraction will enable the continued growth of the industry whilst substantially reducing the significant environmental footprint of fashion.

Circular models which avoid the (re)production of goods (e.g. repair and resale) should be prioritised over recycling as they deliver substantially improved environmental outcomes. This stands in contrast to the current stated targets of many brands which are focused on increased recycling and recycled content given these can more easily be achieved within current operating models.

The scaling of resale models is hampered on the supply side by, amongst other things, persistent concerns around the economic viability of resale models for all products. Our research reveals there is indeed a substantial proportion of lower-value items for which it is currently challenging to derive significant profit through resale models.

However, there are a number of clear actions which can be taken by the industry to change this equation and unlock significant value in the secondary market. Some of these actions such as enhancing the customer proposition or optimising costs are activities which are already core capabilities within the fashion retail industry. Taking action on these areas would help provide the economic impetus for the market to be scaled and realise the significant environmental benefits of increased circularity in the fashion industry.



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