



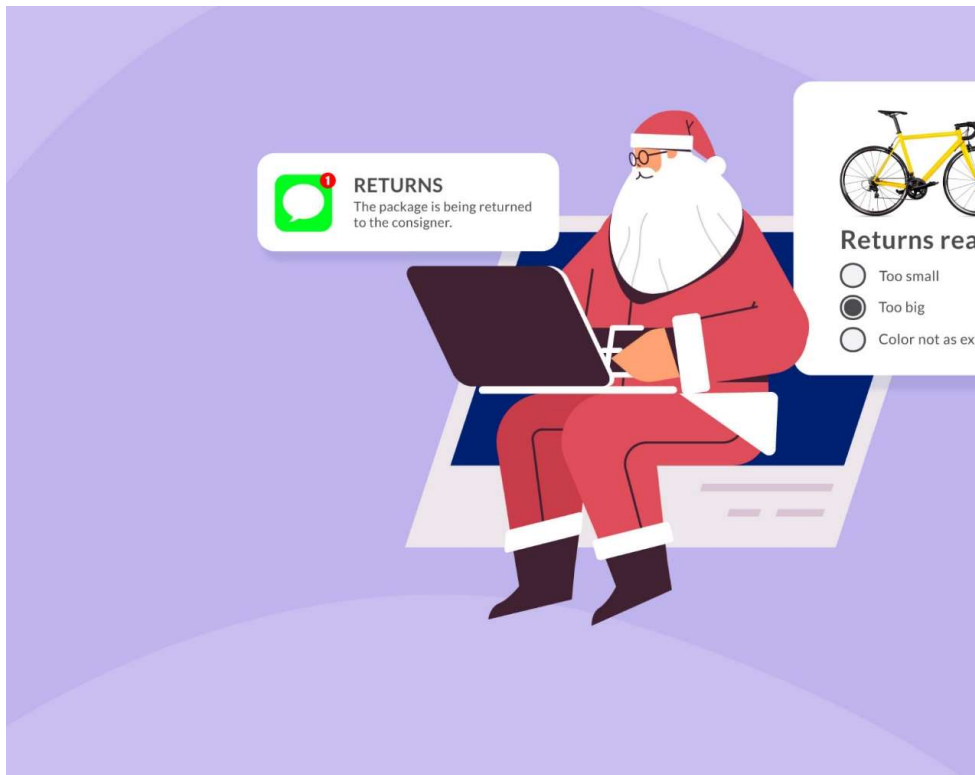
CENTER FOR RETAILING

# CFR EARLY INSIGHT #32

## TACKLING THE CHALLENGE OF PRODUCT RETURNS

Alexander Mafael & Christoph Baldauf

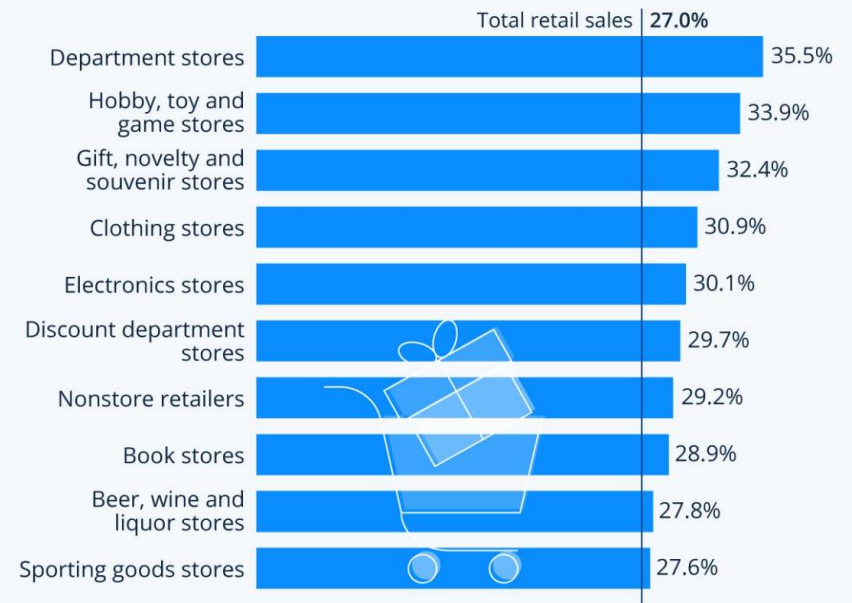
Center for Retailing (CFR) at the Stockholm School of Economics has a mission to provide high-level academic education and to conduct world-class research on retailing in close collaboration with the Swedish retail industry. CFR Early Insight is a breakfast seminar series through which CFR faculty members share insights from ongoing research projects. The series provides a platform for employees at our partner companies to meet and discuss current challenges in retailing.



Sources: Statista, eParcel

## How Important is the Holiday Season to Retailers?

Share of annual retail sales generated in the fourth quarter in the U.S. in 2021, by category



Source: U.S. Census Bureau



By Brennan Doherty 5th October 2023

Amazon starts flagging 'free returned' products that you shouldn't buy

The Amazon logo is displayed in white text on a black background, with the characteristic orange arrow underneath it. The logo is part of a larger graphic that includes orange and black curved shapes.

Illustration: Alex Castro / The Verge

Sources: The Verge, eCommerce Bytes, Entrepreneur, The New Yorker

THE WORLD OF BUSINESS

# WHAT HAPPENS TO ALL THE STUFF WE RETURN?

*Online merchants changed the way we shop—and made “reverse logistics” into a booming new industry.*

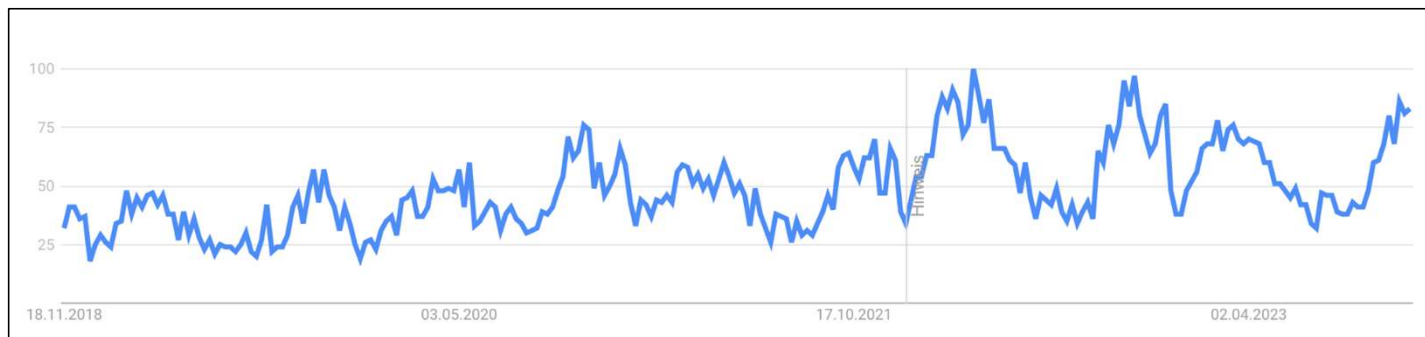
Uber launched a service to make it easier for buyers to return unwanted items ordered online. The move comes 9 months after [DoorDash](#) launched a similar service called [Package Pickup](#).

The Uber logo is shown in a large, bold, black sans-serif font.

# A Short Overview of Research on Returns



**Focus:**  
Research studying  
consumer returns  
(not manufacturer/  
distributor returns).




Sources: Ambilkar et al. 2022; GoogleTrends "Product Returns"

# Main Areas of Research




**Return Policy:** What is the impact of different return policies on return behavior (as a function of policy leniency).




**Return Forecasting:** Critical for production, inventory, and disposal planning and management.



**Product Recovery:** Vital to maximize resource recovery and meet environmental regulations.



**Technology:** Using technology to make return management more efficient and influence consumer behavior in a way that reduces returns.



**Consumer Behavior:** Understanding consumer motivations to return products and their response to return policy interventions.

# Recent and Ongoing Research on Product Returns

- #1 Patel, P. C., Baldauf, C., Karlsson, S., & Oghazi, P. (2021). The impact of free returns on online purchase behavior: Evidence from an intervention at an online retailer. *Journal of Operations Management*, 67(4), 511-555.
- #2 Ongoing research on the impact of online returns on retail store execution (joint work of C. Baldauf, N. DeHoratius, F. Eng-Larsson, and O. Isaksson).
- #3 Ongoing research on the impact of buy-now-pay-later functions on customer shopping behavior (joint work of C. Baldauf, J. Colliander, and A. Mafael).

# #1: What Does the Literature say About Free Returns?

- Lenient return policies as a signal of trust, higher quality, and lower risk (e.g., Janakiraman et al. 2016; Pei et al. 2014).
- Scarce literature on the impact of free returns, however, some studies suggest an overall positive effect of free returns due to, for example, increased loyalty (e.g., Bower & Maxhem III 2012).
- Increasing evidence that a small fraction of customers accounts for a large share of returns (e.g., Ketzenberg et al. 2020) and calls for customer segmentation based on buying and returning behavior (e.g., Hjort et al. 2013).

# #1: The Impact of Free Returns in Online Retail

Intervention in Denmark: Free returns from November 1, 2017 →

January 1, 2017

2 years of customer purchase and return data

December 31, 2018



SWEDEN



NORWAY



FINLAND



FRANCE



GERMANY

**Control group**

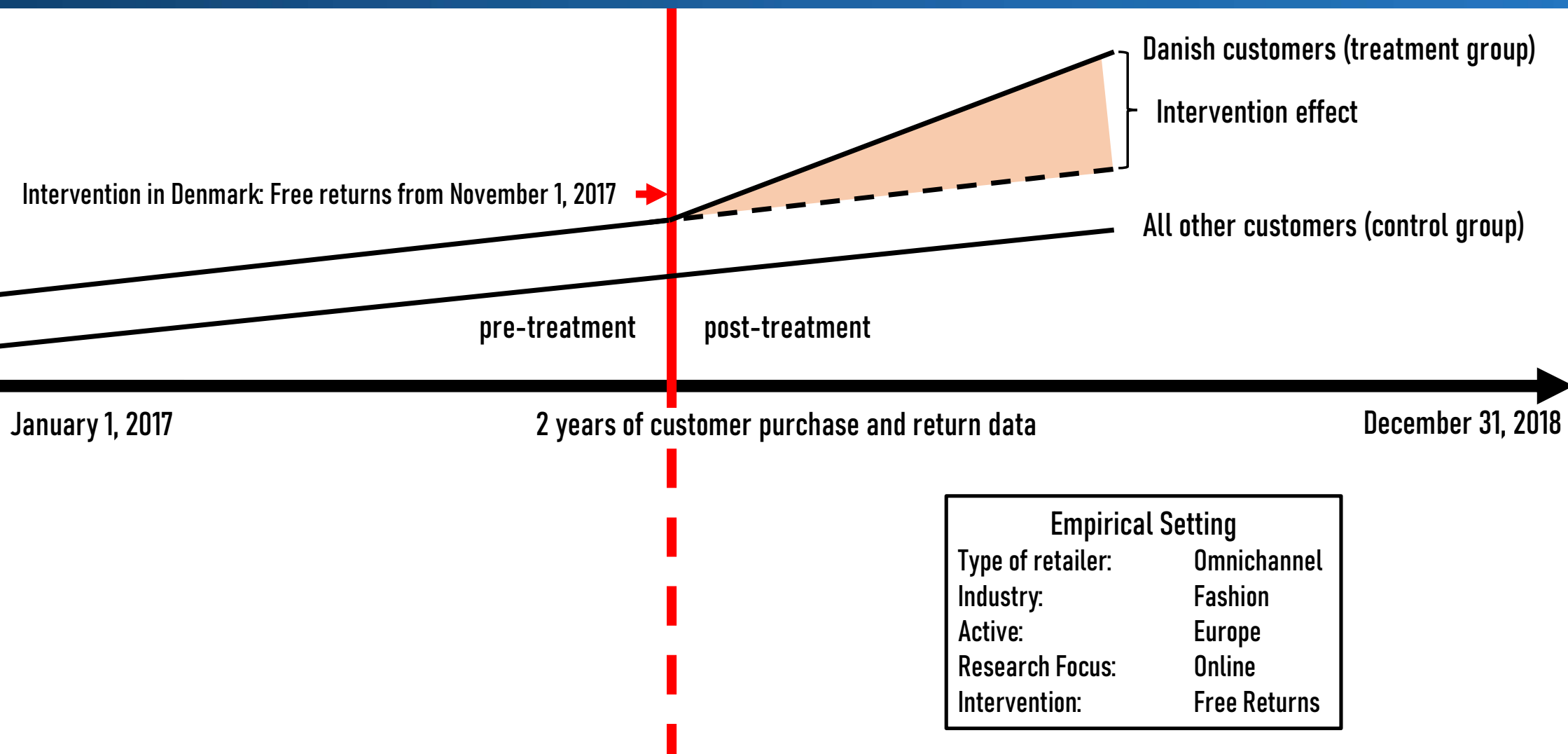
(incl. )

## Empirical Setting

Type of retailer:	Omnichannel
Industry:	Fashion
Active:	Europe
Research Focus:	Online
Intervention:	Free Returns



# #1: The Impact of Free Returns in Online Retail



# #1: The Impact of Free Returns in Online Retail

Intervention in Denmark: Free returns from November 1, 2017 →



Order amount:  
**+9.15%** (SEK 55)



Product variety:  
**+8.74%** (categories per order)



Gross margin:  
**+9.71%** (SEK 30)



Product returns:  
**+7.86%** (0.2 items per order)

January 1, 2017

2 years of customer purchase and return data

December 31, 2018



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**Control group**

(incl. )

**Return cost in Denmark: ~SEK 51 (2017/18)**



SEK 177 per hour  
(excl. other benefits)



Limited economic value  
of offering free returns!

# #1: Key Takeaways

- Offering free returns in online retail leads to desirable changes in customer behavior (e.g., customers are buying more and more diverse items).
- In our setting, these changes likely do *not* outweigh the increased costs (e.g., handling, shipping) associated with offering free returns.
- We thus caution against the deployment of free returns, which is in line with what is being observed in the industry (e.g., Zara, H&M, Uniqlo).
- However, many retailers still offer free returns as part of their service offering (i.e., free returns as a strategic intent).

## #2: What Does the Literature say About Omnichannel Concepts?

- Following the “retail apocalypse,” the role of the physical store is revitalized since omnichannel concepts put them at the center of retail operations (Hübner et al. 2022).
- Omnichannel fulfillment concepts, like buy-online-pick-up-in-store (BOPS) or ship-from-store, are found to have a positive net effect (e.g., Gallino & Moreno 2014; Song et al. 2020).
- Research on the effects of a buy-online-return-in-store (BORS) policy is limited to mainly analytical research that often focuses on the positive cross-selling benefits of BORS (e.g., Yang & Ji 2022).

# #2: Online Returns and the Impact of Stray Inventory

## Returns Management

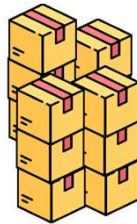
### Buy-online-return-in-store (BORS)



Online customer



Store customer



## Order Fulfillment



Click&Collect



Ship-from-store

### Empirical Setting

Type of retailer:	Omnichannel
Industry:	Fashion
Active:	Global
Research Focus:	Online Returns
Data:	70 stores x 92 days



Do retailers benefit from allowing their customers to return online orders in stores?



What is the impact of online returns, and specifically stray inventory, on store execution?

# #2: Online Returns and the Impact of Stray Inventory

## Increased Store Traffic

Online returns:  
**€13**



Approximately 40% more than the average basket size of €32.



Retailer follows a policy of reselling online returns at the store of return.



Online returns cause **stray inventory**: Items in a store that are not, and *never were*, intended to be sold there.

### How is stray inventory created?

1. Online assortment > store assortment
2. BORS allows customers to return online items to any store of their convenience.
3. Store adds all online returns in inventory regardless if item is sold at store or not.

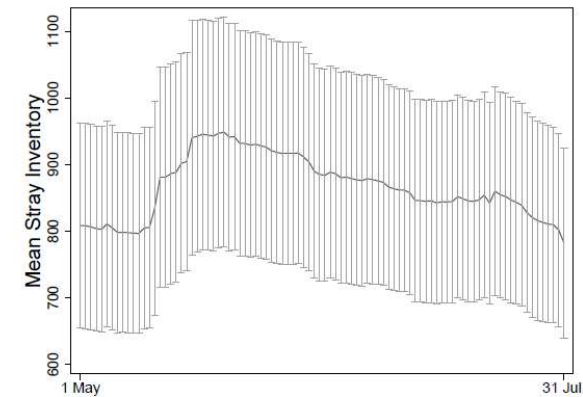
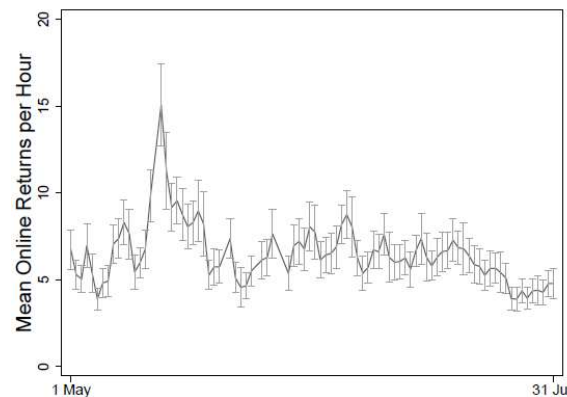
Example category: Women Sports  
Store A                      Store B



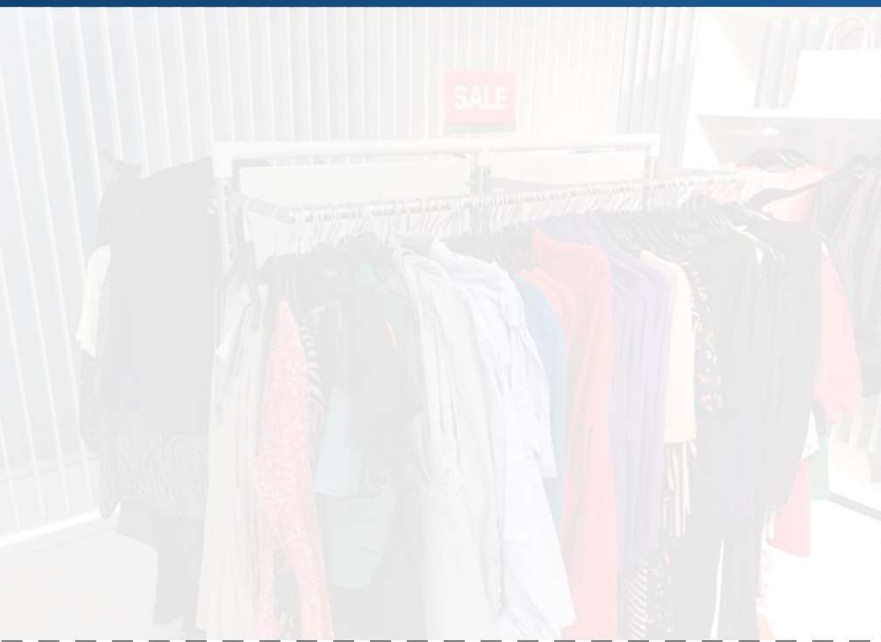
Online returns

### Empirical Setting

Type of retailer:	Omnichannel
Industry:	Fashion
Active:	Global
Research Focus:	Online Returns
Data:	70 stores x 92 days



# #2: Online Returns and the Impact of Stray Inventory



**Stray inventory has a negative impact on store sales.**

Characteristics of stray inventory (derived from a matching analysis):

- Slow-sellers (low inventory turnover)
- Low category depth (often single returned items)
- Sells at lower prices (steep markdowns to move items)

→ **Impact on store execution!**

Do certain stores manage stray inventory better than others?

## Empirical Setting

Type of retailer:	Omnichannel
Industry:	Fashion
Active:	Global
Research Focus:	Online Returns
Data:	70 stores x 92 days

Based on four store execution measures and a quartile analysis (top/bottom), we find that:



Labor Intensity  
(labor hours per open hour)

→ More labor offsets the negative effects of stray inventory.



Depth  
(inventory pieces per SKU)

→ Stores with higher service levels are less hurt by stray inventory.



Breadth  
(number of unique SKUs)

→ Stores with a large assortment better integrate a few more odd items.



Inventory Density  
(inventory pieces per m<sup>2</sup>)

→ Stray inventory hurts “airy” stores more than packed stores.

## #2: Key Takeaways

- BORS customers value the concept and appear to make additional purchases when visiting the store as online returns are associated with higher store sales.
- Online returns impact store execution, and we specifically focus on the impact of stray inventory (i.e., items that the store has never planned for).
- Certain store execution measures, like store labor and assortment size, can alleviate the negative effects of stray inventory.
- A more sensible policy than reselling returns at the store may be to collect and manage online returns centrally (also avoids stray inventory).



## #3: What Does the Literature say About Payment Methods?

- Literature on the impact of the payment method on customer shopping behavior is largely unexplored.
- Payment providers do not fall short of stressing the positive effects of the buy-now-pay-later function on customer conversion and sales (e.g., basket value).
- However, the buy-now-pay-later function may also drive unsustainable shopping behavior, like increased returns, by encouraging unnecessary purchases.

# #3 The Impact of Buy-now-pay-later on Customer Behavior



## Buy-now-pay-later (in 30 days)

Empirical Setting	
Type of retailer:	Omnichannel
Industry:	Fashion
Active:	Global
Research Focus:	Payment Method (66%)
Data:	2 markets, 1 y each



First part of the project is to estimate the impact of buy-now-pay-later (BNPL) on a set of customer order-related measures.

Preliminary results from a regression analysis suggest a substantial and highly significant effect of BNPL.

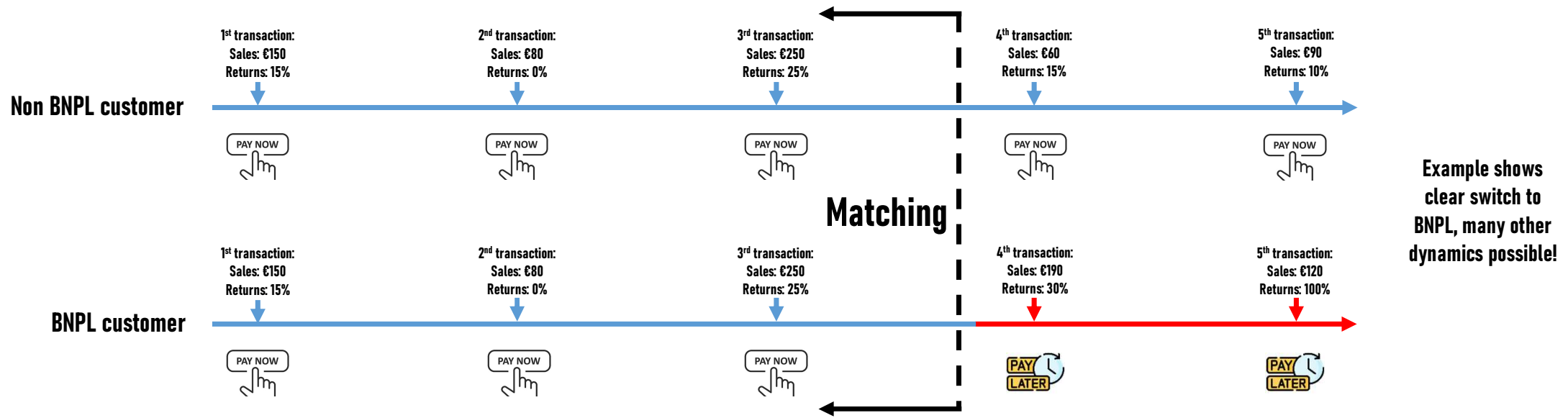
Sales?  
Returns?  
Frequency?  
Price?  
# of categories?

**Sales: + 34% vs. Returns: + 49%**

# #3 The Impact of Buy-now-pay-later on Customer Behavior

NEXT STEP

## Switching Dynamics



NEXT NEXT STEPS

Delivery method as a moderator: Does **GREEN DELIVERY** mitigate the negative effects of BNPL on returns?

Is there a category (“fitting room”) effect: Are certain **TYPES OF PRODUCTS** more prone to BNPL returns?

Is a specific **GROUP OF CUSTOMERS** driving the negative effects of BNPL on returns disproportionately?

## #3: Key Takeaways

- Customers love BNPL as 66% of the orders in our data are placed with BNPL as the chosen payment method.
- Preliminary results suggest a sizeable and robust effect of BNPL on both customer purchases and returns. Other outcome measures of interest include shopping frequency, average price, and number of categories bought.
- Factors are explored that can moderate (e.g., delivery method) and mitigate (e.g., BNPL restrictions for certain products or customers) the negative effect of BNPL on returns (e.g., ASOS).

PERSONAL FINANCE

# Free returns may soon be a thing of the past as retailers roll out stricter policies

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# Are Stores Set Up To Handle a Wave of Online Returns?

NOVEMBER 2, 2023

 Tom Ryan

With many retailers no longer offering free online returns, in-store returns promise to see an uptick. Are stores ready?

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E-COMMERCE, MERCHANDISING

October 7, 2021

# What the Buy Now Pay Later Trend Means for Retail and Returns

# Discussion Questions

- What challenges concerning product returns are you experiencing at the moment?
- Do any of these challenges relate to the literature and research that was presented today?
- Are there any factors that you are interested in from an industry perspective but that we are overlooking?
- How can we tackle the issue of product returns in the long-term?

# Thank you for your attention!



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IF YOU THINK THIS IS INTERESTING:

**Free Returns**



**Patel et al. 2021**

**Role Physical Store**



**Hübner et al. 2022**

**Return Abuse**



**Ketzenberg et al. 2020**

**Omnichannel Concepts**



**Bell et al. 2020**

We will reach out with next year's seminar dates in due time! Thoughts, comments, ideas: [karl.strelis@hhs.se](mailto:karl.strelis@hhs.se)

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