

Achieve Superior Performance Through Omni-channel Reverse Logistics

by

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Abstract

This dissertation first explores the facilitators and barriers of omnichannel returns activities. It then examines how those factors are impacting customers' repurchase intentions and actions on online traffic and brick-and-mortar store traffic. The returns experience is often an overlooked way to drive both customer engagement and repeat sales in omnichannel retailing. Our research finds that a transparent return policy and transparent loyalty program are essential to driving new shopping moments. A return experience enhanced by great frontline employee service can retain existing shoppers and drive more footprints to stores and further stimulate retailer sales.

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Dedication

I dedicate this dissertation to my parents,
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who have always loved and supported me.

I could not be who I am today without their most generous encouragement.

I also dedicate this dissertation to my aunt, Cuiping Wang, my uncle, Weidong Zhao, and my
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Structure of the Dissertation

Drawing on a mixed-methods approach, I conduct two individual studies that consider the impact of retail stores' returns fulfillment operations at the retailer to the consumer level. Part one addresses the factors impacting customers' in-store return experiences using qualitative data from an apparel company. Part two focuses on how retailers improve their returns fulfillment operations at brick-and-mortar (B&M) stores in the omnichannel context through the factors developed in part one.

Part One

As qualitative research addresses the "why," "what," and "how" of a phenomenon (Strauss & Corbin, 1998), a qualitative approach suits the exploration and theory building (Charmaz, 2006). As we explore the factors impacting the returns experience from a customer's perspective, qualitative analysis is used to investigate the convergence of the findings. This study aims to identify factors impacting customers' return experiences within the omnichannel retailing context. Qualitative data are analyzed using coding procedures following Corbin and Strauss (2008).

Part Two

While part one helps develop an understanding of factors impacting returns management at B&M retail stores from customers' perspectives, it does not address the impact of those factors on any relational or performance outcomes, nor how those factors connect to customers' behaviors and retailers' expectations. Part two aims to explore how to utilize those retailers' resources and attributes developed in part one to improve omnichannel returns management, specifically the return experience at B&M stores. Further, we examine how the return experience at B&M stores impacts consumer behavior and expectations regarding return service quality. We develop a conceptual framework with the guidance of justice theory and signaling theory. A series of vignette

experiment studies, also described as "situational experiments" (Bendoly et al., 2006), are conducted to address the research questions.

Vignette experimental methods are used to test the independent variables' causal effects and dependent variables of interest (Tokar et al., 2020). To ensure the manipulation of impactful factors and to rule out potential confounding factors, this method involves the careful development of experimental manipulations through extensive pretesting (Knemeyer & Naylor 2011; Perdue & Summers 1986). These experiments seek to demonstrate the impact of different retail factors on customers' shopping behaviors. As a result, buy online and return in-store (BO-RIS) services may increase a retailer's customer base and drive more customers to shift from the online channel to physical stores.

Overview of Research Methodology

Mixed methods have been gaining popularity in the context of supply chain research. Davis et al. (2011) define a mixed-method approach as "a combination of qualitative and quantitative methods" (p. 468). Modell (2010) explains the value of mixed methods research as a strategy of inter-paradigmatic engagement. Golicic et al (2012) emphasize that traditional supply chain management research has relied heavily on research designs from a quantitative perspective, with less research drawing on a mixed-methods approach. The mixed-methods approach used in this research combines qualitative and quantitative methods to provide a more comprehensive picture of retail returns management in practice. This approach is congruent with Golicic and Davis's (2012) framework for undertaking robust mixed-methods research in supply chain management.

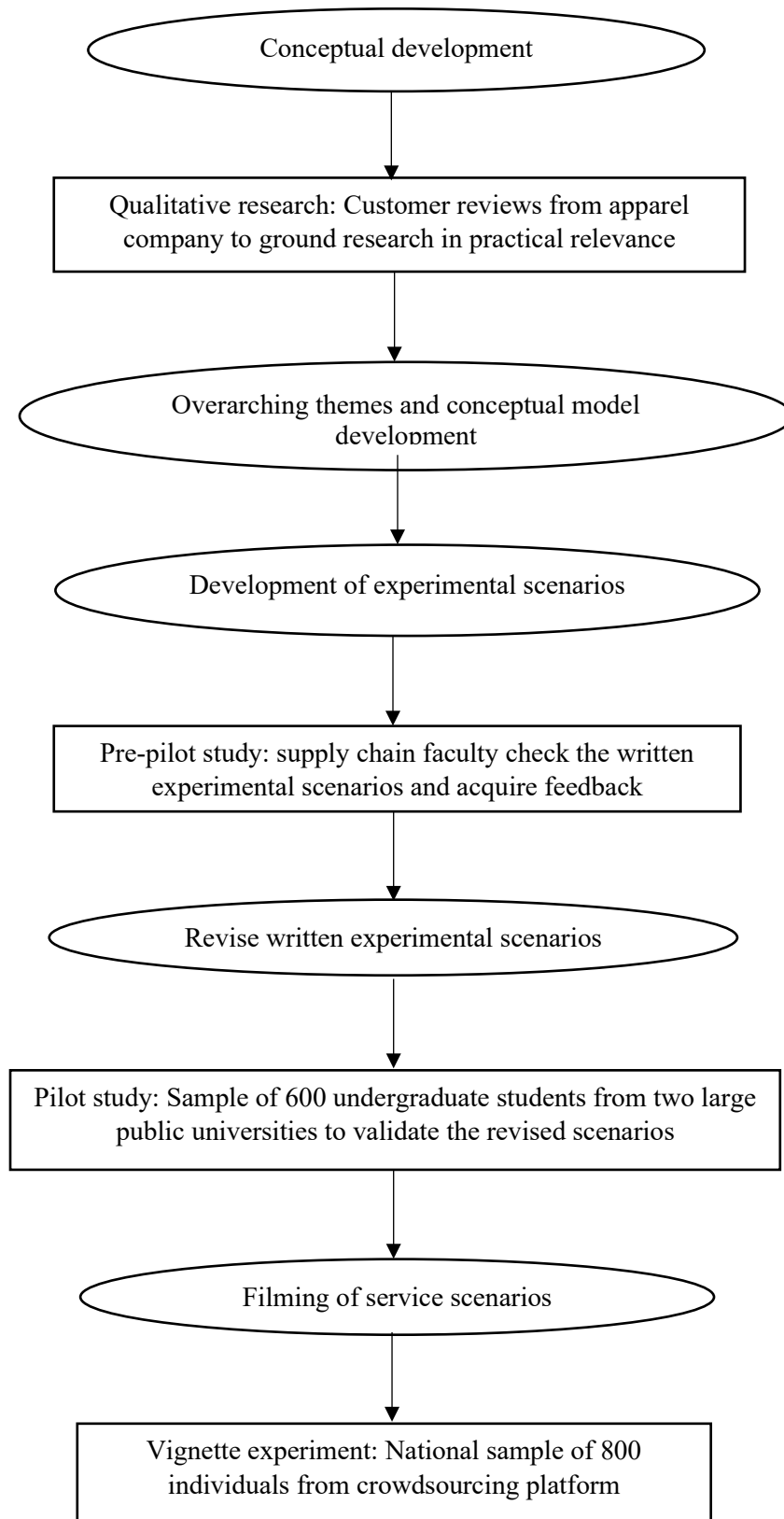
This dissertation's methodological process includes qualitative analysis, questionnaire formulation, questionnaire pilot testing, vignette experiment, and vignette experiment analysis. As we explore the factors impacting the return experience from a customer's perspective, qualitative analysis is used to investigate the convergence of the findings. Stage one is designed to obtain a detailed description and understanding of the nature of customer's return experience at the physical store. We follow the qualitative approach to analyze consumers' return experience reviews on apparel category products. Stage two applies quantitative vignette experiment analysis to augment retailers' return service performance.

Stage one contains a qualitative data collection and analysis of omnichannel data. Due to commercial confidentiality, the company has been anonymized. To perform the data analysis, our research team reviewed over 5000 customer comments on their return experience. As a result, we developed four common themes for classification purposes. Coding is used to reveal "meaning units" of experiences that emerge from the data (Moustakas, 1994), which are then organized into categories and themes to find patterns in the data. Eight coders independently coded the customer comments grouped in pairs, with each coder coding the same pages done by the other so that intercoder reliability could be calculated. The results were collected and refined to converge into a final set of classifications. These findings were paired with a review of the existing literature and measurement scales to develop the scenario manipulations used in stage two.

While the work at stage one develops an understanding of factors impacting customer return experience, it does not address the impact of those factors on any performance outcomes that retailers expect from customers. Stage two discusses vignette experiment procedures, including pretests and the main study. Figure 1 presents the flow chart of the entire data analysis procedure. We later review the literature and define outcome variables the retailers expect to have from customers' perspectives. Measures were selected from previous research and modified to fit the current reserves logistics context. Our goal is to understand how retail store factors impact the customer return experience at B&M stores whether they order from an online or physical store.

Figure 1

Dissertation study flow chart (adapted from Murfield 2012)



Research Contributions

This dissertation seeks to further the understanding of store-based returns process management and customer relationship management by identifying factors impacting customers' in-store return experiences. We then explore how those factors affect customers' repurchase behaviors following the return process in physical stores, especially online customers shopping through an omnichannel context. We empirically examine these relationships with respect to the retail store factors developed from the qualitative research: transparent returns policy, transparent loyalty program, retail personnel capability, and retail capability. The research initially contributes to the returns management process literature by examining, from the customer's perspective, in-store returns process factors that originate from both online and store-based sales. Part one identifies the barriers of the in-store product return process from a customer's viewpoint. Such insights enable managers to evaluate the return service from the customer's point of view and understand how to create a customer experience that matches customer needs.

Further, the research contributes to a better understanding of the returns management process within an omnichannel context by presenting a conceptual framework. This study extends the boundary of supply chain transparency from supplier to retailer-customer relationship management. The study also contributes to knowledge in combining the justice theory and signaling theory in logistics and retail management research. This research provides managerial insights into the role of B&M stores in omnichannel environments and how to handle returns in omnichannel retailing.

I. Part One

1. Introduction

Product returns are a reverse flow of goods in the supply chain (Rogers et al., 2002) and are categorized as the activity of returning goods back through the supply chain with a focus on retailers (Bernon et al., 2011). The management of product returns is treated as a service operation involving the process of handling returned goods from customers (Ahsan & Rahman, 2016). Studies show that product returns management has become an important part of modern business (Daugherty et al., 2019; Ahsan & Rahman, 2016; Petersen & Kumar, 2015). Driven by the free returns and shipping in e-commerce, returns volumes keep climbing, making returns management one of the major challenges for modern retail business (Shang et al., 2017; Ahsan & Rahman, 2016; Petersen & Kumar, 2009).

Consumer product returns are a recurring headache for retailers and manufacturers (Trebicock, 2001; Richey et al., 2004; Morgan et al., 2016). According to the National Retail Federation, customers returned \$396 billion worth of purchases in 2018 alone, close to 10% of total sales. Returns are inevitable in retail since it is impossible for consumers to fully resolve all uncertainty regarding the product's fit prior to purchase (Petersen & Kumar, 2015). Products are often returned with no functional or cosmetic defect, but rather because of the mismatch between product characteristics and customer preferences during the trial period (Shang et al., 2019; Ferguson, 2006). According to a report from the consulting firm Invesp in 2018, approximately 30% of all items ordered online are returned, compared to only 9% of items purchased in physical stores. Specifically, returns for online purchases of apparel and footwear tend to be higher as customers cannot easily discern differences in sizing and appearance (Anderson et al., 2009).

Customers that cannot easily discern differences in sizing and appearance online tend to order multiple sizes or similar items with the intent of sending unwanted items back, a behavior now recognized as "bracketing." Incentivized by free shipping and free returns offered by retailers, a growing number of customers are bracketing. As online retail sales continue to grow at a rapid pace, overall returns continue to increase. In 2017, \$121 billion of e-commerce purchases were returned, a number that is expected to reach 348 billion by 2023, based on National Retail Federation predictions. United Parcel Service (UPS) observed a 23% increase in returns volume in January 2021 compared to the same time in 2020. In light of this shifting consumer behavior, retailers must address the rising volume of online returns. An industry study by UPS (Brill, 2015) revealed that consumer returns management has become one of the top managerial challenges faced by U.S. retailers, and therefore an efficient returns operations program can differentiate a retailer from its competition, providing a means of gaining a market advantage (Daugherty et al., 2019; Ahsan and Rahman, 2016; Richey et al., 2005; Stock 2001).

Returns have long been considered a cost center (Petersen & Kumar, 2015; Daugherty et al., 2005; Blackburn et al., 2004; Rogers & Tibben-Lembke, 1998). Excessive returns can substantially affect profit margins and require that firms allocate and commit financial, technological, managerial resources to achieve reverse logistics capabilities for managing returned products (Richey et al., 2005). A typical product return involves multiple processes that burden retailers with additional costs, including receiving, sorting, processing, restocking or scrapping, and customer support (Mollenkopf et al., 2011). Researchers have estimated that manufacturers and retailers spend more than \$100 billion each year on return-related logistics (Chen and Chen, 2016). Considering the increasing overall return rate and cost to process returns, returns management is regarded as one of the most expensive problems retailers face.

Moreover, omnichannel retailing presents new challenges for product returns management as firms move towards integrating returns, information systems, and inventories that have typically operated as discrete entities (Bernon et al., 2016). Omnichannel retailing aims to provide a seamless, consistent, and more reliable customer experience than traditional retailing by coordinating processes and technologies across all channels (Saghiri et al., 2017; Ailawadi & Farris, 2017; Verhoef et al., 2015;). As denoted by Daugherty et al. (2019), omnichannel refers to the development of "a truly integrated approach across the whole retail operation that delivers a seamless response to the consumer experience through all available shopping channels" (p.5). Even though academic research of omnichannel retailing continues to grow, returns management process integration within omnichannel literature is far from mature. Without the guide of well-established omnichannel integration, rising e-commerce return rates are burdening omnichannel retailers.

As a result of increasing returns volumes and mounting costs, companies seek prescriptive methods to reduce customers' return rates and improve reverse logistics by balancing different return options in the omnichannel retail context. Much attention has been focused on understanding reducing rates of return. The extant literature reveals factors that drive returns, including returns policy (Shang et al., 2017; Wood, 2001), pricing strategy (Akçay et al., 2013; Anderson et al., 2006), and online technology used for a retailer's website (Gallino & Moreno, 2018; De et al., 2013). Scholars note that the customer returns process has received significantly less attention from researchers (Daugherty et al., 2019; Bernon et al., 2016; Bourlakis et al., 2016). This lack of academic attention is surprising, given that practitioners have a long-standing goal to minimize the costs of returns management (Stock & Mulki, 2009; Daugherty et al., 2001, 2005).

Omnichannel

The predominant fulfillment channel for online returns has been supported as "click and collect" and "return to store" for customers (Bourlakis et al., 2016), as is supported by the omnichannel structure. Omnichannel unites all customer touchpoints to deliver a seamless customer experience, allowing consumers to browse, purchase, and return goods across a variety of channels. Providing a seamless shopping experience requires retailers to embrace not only all purchase channels, but also all return channels in the omnichannel retail context. (see Figure 2) (Xu & Jackson 2019). Return channel forms include returning a product to the store, shipping the product to the manufacturer's/retailer's warehouse, and shipping the product to manufacturer's factory, with the return to store option generally considered most economical for retailers (Bourlakis et al., 2016).

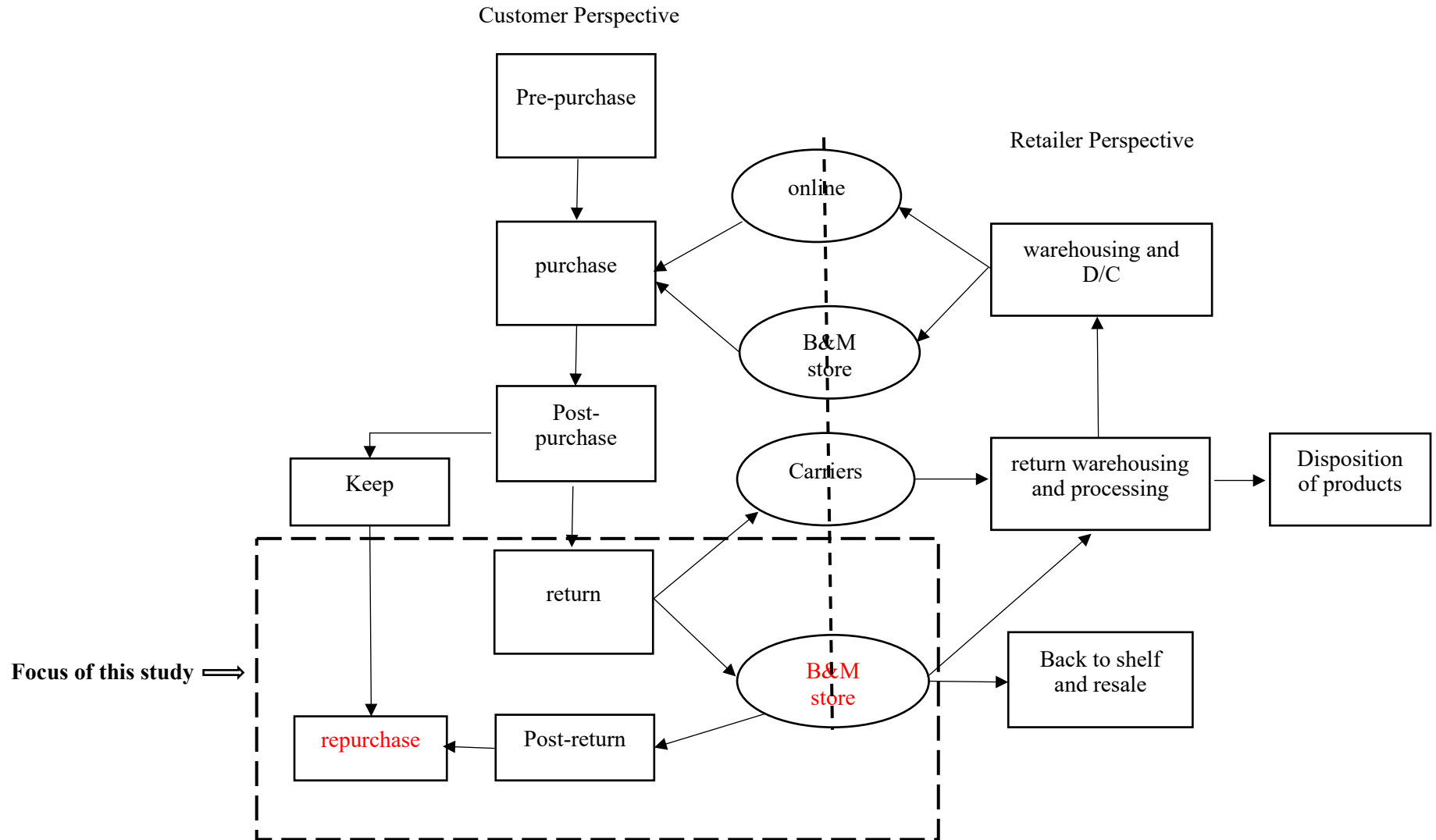
Stores with an omnichannel capability can minimize return costs across their networks and get to the optimal final disposition in the fastest way. According to an Alix Partners study (2019), the in-store returns process costs retailers, on average, \$3 per package. Other channels cost even more: shipping to a distribution center can run retailers up to \$6 per package, and when processed through a third party, \$8 per package. To manage these reverse logistics costs, retailers are therefore encouraging in-store returns for online purchases.. Coresight research (2019), a retail consulting company, demonstrates that BO-RIS has been growing across the globe: 38% of retailers reported an increase in BO-RIS in 2018, in addition to the 11% of online sales returned to B&M stores in 2017. Furthermore, the adoption rate is particularly high for omnichannel vendors, as 70.5 % of U.S. omnichannel retailers offer BO-RIS.

A UPS survey in 2017 indicates that avoiding paying for shipping, receiving an immediate refund, and the convenience of in-store returns are the main reasons for consumers to use BO-RIS.

The same survey study found that 34% of customers would use BO-RIS to make an exchange for another product. This finding presents a real opportunity for retailers to engage the consumer and potentially drive additional sales once the customer is in store. Existing literature reveals that personal interaction between the buyer and seller is essential in creating customer lifetime value (Ho et al., 2006; Ulaga, 2003; Flint & Mentzer, 2000). However, little research has explored how to take advantage of this additional face-to-face interaction to enhance customer relationships or drive sales.

While retailers accept product returns as a necessary cost of doing business, too often, they are fire-fighting the returns problem rather than managing it through strategic planning that delivers value. Studies of service failure and recovery indicate that failure can create an opportunity to improve customer satisfaction if the service provider follows up with appropriate recovery actions, or further diminish customer satisfaction if recovery is inadequate (Cheng et al., 2019; cf. de Matos, Hentique, 2007). We similarly argue that legitimate product return events can serve as opportunities for the retailers to delight the customer and increase in-store sales if handled well. However, it is unclear if return events can be leveraged as such opportunities and when return events would be perceived by customers as satisfactory. These are pressing issues because retailers strive to drive more customer traffic to B&M stores and satisfy the immediacy for the customer. To illustrate the potential opportunity within the returns process, Figure 2 provides a simplified view of the purchase and return that integrates retailer and customer, highlighting this study's focal point.

Figure 2
Conceptual framework for omnichannel purchase and returns process



Unlike sales events, return events are high-risk/high-reward customer interaction points for retailers (Ertekin, 2018). High risk means frustration and a lack of trust can frequently arise, which may deteriorate customer relationships and damage customer lifetime value if not handled well. Unhappy customers may share their unresolved complaints to thousands of others through easy access to the online environment (Skinner, et al., 2011; Tsang & Zhou, 2005; Ward & Ostrom, 2003). A recent industry survey of customers showed that 86.9% of respondents would be willing to share a negative in-store return experience with their family and friends, while only 83.3% of respondents would share a positive one, indicating that customers are more willing to share unfavorable experiences. (LoyaltyOne, 2015). The ripple effect further weakens retailers' reputations and marketing efforts (Knox & van Oest, 2014), therefore demonstrating the impact of a bad return experience outweighing the loss of one dissatisfied customer.

Conversely, if handled well, retailers can use this additional customer interaction opportunity to mitigate customer dissatisfaction with the initial purchase and strengthen long-term customer relationships (Ertekin, 2018). Hence, we focus on examining the problems retailers have in handling customers' returns at B&M stores, and then explore how returns experience affects retailer-customer relationships and customer shopping behavior. This dissertation aims to better understand returns management by investigating the phenomenon of the omnichannel return through the following research questions:

1. What factors impact customers' in-store return experience and how they fail/succeed to meet customer satisfaction?
2. Utilizing retail store resources, how does a retailer improve the in-store return experience?
3. How does the in-store return experience impact customers' repurchase behaviors in the short-term and long-term in the omnichannel retailing context?

2. Literature review

Consumer returns research examines the management of the returned products, including the efficient and effective acquisition, processing, and disposition of returns (Abdulla et al., 2019). Those processes and decision-making regarding collecting returns from customers fall under acquisitions, while processing focuses on the dispensation of acquired returns and disposition concerns their ultimate disposal (Su, 2009). Rogers et al. (2002) define the product returns process as:

activities associated with returns, reverse logistics, gatekeeping, and avoidance [that] are managed within the firm and across key members of the supply chain. The correct implementation of this process enables management not only to manage the reverse product flow efficiently but to identify the opportunity to reduce unwanted returns. (p. 1)

Daugherty et al. (2005) find that reverse logistics resource commitment in information technology capabilities had positive economic and service quality effects. Richey et al. (2005) highlight that resources must be used innovatively to handle returns. Genchev et al. (2010) argue

that resources must be allocated to developing reverse logistics programs to avoid the potential negative impact on the bottom line. Conversely, if adequate resources (tangible/intangible or property-based/knowledge-based) are targeted to reverse logistics programs, it can have tremendous positive financial impact as well as important relational implications. (p. 20)

Recently, Morgan et al. (2016) discuss how to advance reverse logistic competency via information technology and collaboration. All these studies examine how to effectively manage the reverse flow after products have been received from customers.

Unlike other contributions in reverse logistics, we specifically focus on the perspectives of retailers at the customers' interface. Bagdare and Jain (2018) state that previous studies gave very little attention to the retail customer experience. When an end customer begins the reverse logistics process, it begins with the retailer in the omnichannel retail context. How well the retailer manages the reverse logistics process may determine its cost savings and the customer's satisfaction with

the retail encounter (Horvath et al., 2005; Jack et al., 2009). For most retailers, customer service does not end once a product is sold, and in light of this, they need to offer return options to resolve customer dissatisfaction. The integration of physical and online channels allows retailers to offer different return options to end-consumers (see Figure 2), with 'click and collect' and 'return to store' being the two preferred options widely adopted by retailers (Bourlakis et al., 2016). The highest occurring return route for online sales is found to be "return to store" (Bourlakis et al., 2016), which is in line with retailers' expectations.

After-sales service is regarded as a key revenue generator and competitive differentiator in creating sustainable relationships with customers and contributing to customer satisfaction (Murali et al., 2016). Likewise, customer returns management can be a strategic asset and a key differentiator for many retailers (Daugherty et al., 2019; Richey et al., 2005). The ease of the returns process and how customers are treated have a substantial impact on repeat sales (Burnson, 2014; Starbuck, 2017). Peterson and Kumar (2009) find that return-experienced customers tend to buy more from the retailer over time. Griffis et al. (2012) show that quicker refunds on returns result in increased follow-on spending. Hence, we propose that a retailer can efficiently leverage a "return to store" strategy to create opportunities for improved customer satisfaction if followed up with appropriate actions. Existing research points out that strategic resource commitment in reverse logistics is critical to program performance (Rogers et al., 2002; Richey et al., 2005; Daugherty et al., 2005; Morgan et al., 2016), but the resources and capabilities needed for retailers to better manage the returns process in omnichannel retailing are not yet clear.

3. Methodology and Data Analysis

We employed a qualitative analysis to answer the first research question: "What factors impact customers' in-store return experience and how the retailers fail/succeed to meet customer

satisfaction." This study explores factors that impact customers' return experiences at B&M stores in omnichannel marketplaces, and a qualitative research approach is deemed appropriate for an exploratory study.

A majority of the existing research on returns management focuses on investigating operations within a single channel and overlooks the emerging operational challenges of omnichannel. To gain a holistic view of the complexity of handling returns in omnichannel, we collected data through site visits, direct observation, and content analysis. Our research team had the opportunity to visit and tour two of the focal company's distribution centers to observe operational activities, specifically returns operations, to explore the thematic issues relating to the management of omnichannel retail returns. Throughout the two-day visit, the researchers had a chance to see how the distribution center fulfills in-store and online orders and handles online returns. The manager reported that their distribution center accounts for 20% of online sale returns, with the remainder going back to their physical stores.

To gain in-depth insights and knowledge on the research questions, the company shared its U.S. returns feedback from its customer base with our team. Due to commercial confidentiality, the name of the company and customer identities are anonymized. The apparel company operates over 800 stores across North America, Europe, Asia, and the Middle East, comprised of multiple brands targeting customers across different generations. Analysis of the data was conducted through the research team reviewing the Excel file, looking for common themes for classification purposes. The results were collected and refined to converge into a final set of classifications. We were coming at this from an interpretive perspective while recognizing the potential of hypothesis testing in later research.

Our research team (eight coders) reviewed over 5,000 customer review comments collected through the focal company's survey from its customer base. We classified them into eight themes following the coding process. Coding is used to uncover "meaning units" of experiences that emerge from the data (Moustakas, 1994), which are then organized into categories and themes to find patterns in the data, allowing the researcher to connect contextual rich descriptions with more abstract theoretical categories (Charmaz, 2014). In the initial coding phase, eight coders independently coded the customer comments grouped in pairs. Each coder coded the same pages done by the other so that we could calculate intercoder reliability. After going through several iterations between the data and codes, the results were refined to converge into a final set of classifications. We also compare and identify commonalities and differences across each code, which enables us to have a more comprehensive understanding of customers' return experience concerns.

The following section presents the themes and concepts that emerged from omnichannel reverse logistics data. The eight themes include issues regarding exchange policy, refund policy, returns policy, retail store operation, loyalty program, product quality, store associates, and store managers. Table 2 provides descriptions and examples of emerging themes.

Table 1

Description and examples for emerging codes

	Theme	Code	Online Retail Quote	Offline Retail Quote
Policy	Exchange Policy Issue	Inventory Depth	Sometimes I prefer to try things on in the store to see how it looks rather than purchasing it online	"It would be helpful to see more inventory in the stores. I always see size small or extra small. I would like to see more medium and large sizes of ALL products. "
		Inflexible Exchange policy		"I tried to return a product that has a tag but no receipt in order to exchange size. I tried to exchange for a similar product with the same price tag only to be told the one I am exchanging is only marked less than half the value I paid and I would have to pay additional for other similar product/shirt."
		SIZE	I am so sad I had to return the jeans I bought online. The all short sizes sold out so fast.	
		Price consistency	prices do not reflect online prices (not talking about exclusive online sales) they just don't match.	"A rep was kind to tell me that if it's cheaper online they can price match, but couldn't since there is no reception inside the store."
	Returns policy Issue	Inflexible returns policy		"I was trying to return or exchange an item that I bought in the store the weekend prior, but the item was no longer in stock. I thought I would be able to return the item at the store have the store place the order for the item that is available online, but I was told that the system was not set up to do such a transaction."
	Refund Policy Issue	Inflexible refund policy		"had 2 brand new polo shirts with original tags still attached. Both polo shirts were 58 dollars each when I purchased a while back. I lost the receipt and I understand that the store can only give me store credit. But to give me a total of 22 dollars of store credit when the value of both polo shirts is a total of 116 dollars. That's terrible customer service and a rip off. I feel even though I didn't have a receipt, the return could have been fair."
		Inflexible refund policy		"I bought a shirt on sale for \$9.99 and when I got home I realized there was a hole in it by the tag. I go away to college so I could not return it till now when I am off. I found another shirt that was also \$9.99 when I went back to the store so I figured I would just do an exchange instead of return. When I got to the register, the guy told me I could only get \$6.99 back because I did not have a receipt?"

Loyalty	Loyalty Program Issue	Loyalty program issue		"lack of knowledge about promotions and discounts and club program. we were encouraged to join, but it was not clear how much we would earn.. then after we logged in to check rewards, noticed banner at top of customer account page for \$20 of \$100 this weekend"
Store operation	Retail Store Operation Issue	Signage		" I stated to her that obviously customers don't where the waiting line is. Again, she repeated to methe "there is only one-line sir" with her solemn face. After her obnoxious service attitude, I decided to return my purchase right there and walked out the store."
		Speed at store		" I was directed to different registers to make my return several times before who I assumed was the manager finally helped me at the original register I went to."
		Store condition		"Fitting room a mess and long wait. Checkout failed to remove sensors requiring me to return to store tomorrow."
	Product Quality Issue	Product quality	I hope this company has a better system in dealing with damaged goods, and make sure those items are not circulating in the store.	"I purchased some items online, one in particular was available instore, so I went to pick it up, ended up being a damaged item because the security tag was tagged on the fabric instead of on the seams."
Frontline employee	Store Associate Issue	Unprofessional sales associate attitude/ associate incompetence		"Do not allow your associates to use their cell phone at the checkout while the only customer in the store is standing in front of them waiting to check out but they are too busy texting to notice! They then proceeded to not give the discounted promotion that was indicated on the sign when I walked in AND failed to remove the security tags from my items. "
		AI / USAA / SAS	"I really love this store but I'm not happy with my past two experiences, I think I'll be shopping online from now on."	"I returned to the store to have a sensor removed, because it had been left on"" As I waited, I watched the girl behind the register continuously roll her eye at every question she was asked and the tone she was using with the customer was so rude."
		AI		"When she took out the security pin, I believe she actually ripped a hole in the hoodie because there wasn't a hole near the neckline. it wasn't until I got home, I noticed the ripped hole."
		/ USAA	The returns policy when I spoke to a customer rep online was stated differently to me at that time versus what I encountered in the store.	"the sales associates are very off-putting (almost rude) and are NOT customer service oriented. I'm done shopping at this company."

	Store Manager Issue	Unprofessional sales manager attitude	"I had a rather large online return and the manager came over and was quite rude in questioning the size of the return and wanted me to understand that this return was going to go against his and the store's sales for the day. "	"I also observed his rude and disrespectful behavior toward multiple associates while I was standing in line."
		USMA / SAS	" I was picking up an online order in which I waited on a very long line. "	"the store manager had me wait again on another long line to return the item. "
		Manager incompetence	" I waited at the cash register for more than 15 minutes waiting for the in-store Manager to assist the cashier with an exchange I had previously purchased online and brought in-store to exchange for a different size."	"This experience was not the cashier's fault, but rather the manager and management in-general who understaffed the store."

4. Discussion and Literature Integration

The qualitative analysis provides an insightful understanding of the buy-online return in-store experience from the customers' viewpoint. Our empirical analysis demonstrates that eight issues lead to unsatisfactory returns experiences for customers within the context of omnichannel retailing (see Table 3). From a retailer's perspective, resolving those issues could help develop capabilities or competencies if followed with proper actions. These findings echo Daugherty's (2019) research call for retailer capability exploration in the age of impatience. To gain a broader understanding of the findings, I discuss each theme within the existing literature.

Existing literature extensively investigates returns policy effects on consumer purchase and return decisions (Janakiraman et al., 2016; Jeng, 2017). Abdulla et al. (2019) introduce seven classifiers (see Table 3) describing returns policy leniency: money-back guarantees adoption, monetary leniency, time leniency, effort leniency, scope leniency, exchange leniency, and overall leniency. Lenient return policies permit customers to purchase and try products during a specified time window and return the product if it does not fit or meet expectations. Alpetkinoglu and Gragas (2014) suggest that, with a lenient returns policy, a retailer should decrease product variety and make the assortment mix based on popular products that have a lower probability of being returned. Using the classifiers as a guideline (see Table 3) (Abdulla et al., 2019), I combine the discussion of the three themes developed in the qualitative analysis: refund policy issue, exchange policy issue, and returns policy issue. The refund policy issue in the qualitative analysis fits with the monetary leniency dimension; the exchange policy issue matches with exchange leniency; the returns policy issue corresponds to one or several dimensions of leniency, such as effort leniency or scope leniency.

Table 2*Return policy leniency classification (adapted from Abdulla et al. 2019)*

Return policy leniency dimension	description
Money-back guarantee adoption	A binary decision about offering a money-back guarantee.
Monetary leniency	The amount of refund and restocking fees.
Time leniency	The length of the time window allowed for returns.
Effort leniency	Degree of hassles imposed by a retailer.
Scope leniency	The degree to which a uniform return policy applies to various products/categories.
Exchange leniency	Whether a retailer offers a cash refund or only store credit.
Overall leniency	An overall assessment of leniency.

Exchange policy

Existing literature related to exchange issues focuses on exchange leniency. While Heim and Field (2007) show that exchange leniency is not a significant predictor of a customer's rating of a retailer's return service convenience, d'Astous and Guevremont (2008) find that it affects customer perception of the retailer's image, although it may not impact the perception of product quality. These studies investigate the outcomes of exchange leniency, but qualitative analysis findings indicate that the exchange issue is related to the operation level. failing to satisfy customer demands. This failure results from retailers' lack of inventory depth. Inventory is related to the management of items held in inventory and used to satisfy demand, including both the timing and quantity of replenishment, storage, transportation, and handling (Abdulla et al., 2019). Customers start with an exchange mindset and end up with return action. The retailer then loses the chance to transform one exchange into another sale opportunity. The exchange policy issues demonstrate that the omnichannel retail environment is not well-developed yet. Our

qualitative analysis supports the view put forth Bernon et al. (2011) that integration is essential to handle the complexity associated with omnichannel retailing.

Refund policy

Within the context of a decision variable, monetary leniency represents a refund amount of the purchase price (Yalabik et al., 2005; Su, 2009). It can also be expressed as a restocking fee or nonrefundable charge (Shulman et al., 2009, 2011; Swinney, 2011). Su (2009) examines both money-back guarantee adoption and monetary leniency in the form of a refund to the customer when making a return. The money-back-guarantee corresponds to the refund policy issue I find in the qualitative analysis. The customer cares about the amount of refund and the form of a refund, like whether a retailer offers a cash refund or only store credit. In line with Heiman et al.'s (2015) finding, customers value policies that offer a cash refund over store credit. Even though the existing literature indicates full-refund policies are overly generous and the optimal refund amount should be equal to the salvage value (Su, 2009), the full-refund policy is widely applied in apparel retailing. Qualitative analysis of customer reviews shows that online and offline price discrepancy poses a challenge for omnichannel retailing returns processes, leading to both returns friction and customer dissatisfaction. Information support has long been recognized as a competitive weapon to achieving efficient reverse logistics operations (Daugherty et al., 2002; Richey et al., 2004), so retailers may need to invest in software that keeps stores abreast of online price changes and track customers' transactions (Smith, 2005; Bourlakis et al., 2016). Seamless software makes it transparent in order to refund customers the amount they paid originally, even with applied discounts. Greater transparency also benefits retailers by preventing customers from buying the product at a secondary market, returning the product to a primary market, and receiving a higher refund for the return (Smith, 2005).

Returns policy

The length of the return period is another returns policy concern. Xu et al. (2015) examine the relationship between the length of the return window and the product life cycle. For products with a short life cycle, the retailer chooses an indefinite return window; for products with a moderate life cycle, the retailer chooses a fixed return deadline that is shorter than the product life cycle; for products with a long life cycle, the optimal return time window is either indefinite or a fixed deadline. In practice, fashion retailers adopt a fixed return time window (Xu et al., 2015). The qualitative analysis reveals problems with the execution of time leniency. For instance, a customer may return a product on the verge of or slightly over the return window. Whether or not staff accepts the return is a judgement call at the store without readily available information. If they choose not to accept the return, the retailer's public image could be damaged. Creating coherent IT systems and integrating systems throughout different channels can ensure accurate access to information (Smith, 2005). Accordingly, product returns across channels can be fully reconciled. Meanwhile, full traceability and tracking capabilities through reliable information enable retailers to provide customer's after-sale information. Information support helps retailers claim value that might otherwise be lost, and it also might serve to improve the retailer-customer relationship through customer service (Smith, 2005).

Our qualitative analysis indicates that returns policy does play a role in the overall returns process, but more than only focusing on leniency dimensions. The customer also cares about the execution of the returns policy during the returns process. Taking together the policy concerns and operational activities, we introduce the concept of the transparent returns policy. According to the definition of supplier transparency from Morgan et al. (2018), stakeholder visibility results from making information about various aspects of the supply chain available to stakeholders, in

addition to utilizing the information within the firm. Traceability provides product activity information, including run quantity, transport time, and level of work in progress. As an indispensable component of the supply chain, retailers can enable visibility in the returns process by making information about various aspects of returns available to customers utilizing the information within the organization. In the meantime, retailers can achieve traceability by providing consumers the activities of the product returned throughout the whole supply chain. As the omnichannel moves towards integration, the ability to trace activities becomes a helpful tool for evaluating, monitoring, and solving supply chain stakeholder concerns (Simatupang & Sridharan, 2002). Visibility of the policies and traceability of returns information may contribute to retailer transparency, given the type of information captured and the accuracy of that information (Sarac et al., 2010). Since many retailers now have massive amounts of data related to customer transactions and behaviors, it is within their reach to institute transparent return policies that can be adapted to individual customers. Thus, the transparent returns policy is conceptualized as having two dimensions: strategic and executive. The strategic dimension incorporates visibility of the return policy emanating from external signaling to stakeholders, including frontline employees, retail managers, customers, while the executive dimension provides traceability of refunds and returned products through retailer coordination across operations.

Two multi-item measures will be used in the pilot study, and then validated in the major data collection phase. Example items for visibility include: "The returns policy states that the retailer will issue a refund (credit card or cash) for all merchandise (get a full refund on a product without the need to funnel credit into a lateral purchase)"; "The returns policy states that the retailer will initiate a return for all merchandise in good condition, even without a receipt"; and

"the returns policy state that the merchant will make an exchange for all merchandise in good condition." The traceability items measure the ability of retailers to trace return-related information in three areas. Example items include: "The retailer provides the status of your credit refund time and track information"; "The retailer provides the status of your return package information in the returns process"; and "the retailer provides the customer with the exchange of the same product by tracking the inventory availability (no price discrepancy)."

Product quality

Product quality, defined as "the degree of how well the product specification fits the customer's expectation" (Yu & Fang, 2009, p. 5), is the top concern for customers when purchasing a new product (Zhu & Zhang, 2010). Transparent return policies benefit not only customers, but also retailers as achieving transparency through integrating information systems in the omnichannel will help them identify the source of product issues, inventory levels, and provide timely alerts to the responsible business team for resolution. Furthermore, operational traceability may help retailers enhance communication and collaboration with suppliers and vendors (Morgan et al., 2018).

Retail store operations

Qualitative analysis reveals one operation challenge in the B&M store return experience: processing speed. From the customer's perspective, speed has two elements: first, the speed at which a customer receives a credit for their returned purchase (Bernon et al., 2016; Smith, 2005); second, the speed at which the counter representative handles the returns process (Bourlakis et al., 2016; Griffis et al., 2012). Just like the request for speedy delivery, customers demand speed of returns. When customers return products to the physical store, the return can be handled instantly,

at which point the customer could receive credit (Bernon et al., 2016; Smith, 2005). In contrast, a customer returning products via the postal service does not receive a refund until the product has been received at the retailer's operations and cleared for credit (Bernon et al., 2016).

Recently, some retailers even refund customers immediately when a package is identified and picked up by carriers. Because customers are demanding speed with the returns handling process (Griffis et al., 2012), it becomes even more critical for retail stores to provide outstanding in-store service in order to drive customer traffic. The qualitative analysis reveals that customers are not satisfied with the long wait times in the physical store's returns process, especially unexplained and unorganized waiting. Customers expect prompt, effective service, as well as full visibility and tracking capabilities regarding their returns process (Daugherty et al., 2019), hence the speed of return could be one dimension in determining retailer customer service.

If a customer wants to return an item, they must meet the procedure and documentation requirements in order for the retailer to accept the return, which generally is termed as "hassles" (Wachter et al., 2012; Ahsan & Rahman, 2016). As for effort or hassle in the returns process, Hsiao and Chen (2014) show that less effort and hassle in the returns process generate positive consumer behavioral outcomes for different customer segments. Our analysis also reveals that the inconvenience associated with the returns process leads to consumer frustration. Prior research finds that hassle-free and convenient returns is a strong signal of the seller's product quality and service performance (Ahsan & Rahman, 2016). Thus, retailers should create a returns process that is convenient for customers.

Frontline employee capability

Research has supported the idea that salespeople play an essential role in developing strong relationships with customers as salespeople are at the front-end of retailing, interacting with customers (Boshoff & Allen, 2000; Ellinger et al., 2008). A stream of literature has examined that stores with friendly and cooperative employees are considered prestige-image stores that generate high-quality service and high customer perception of service quality (Ertekin et al., 2019; Rahman & Ahsan, 2016; Berman et al., 1995). Service employee friendliness refers to the degree to which the employee exhibits a pleasant, cheerful demeanor toward the customer (Ertekin et al., 2019). It presents in the form of being courteous, helpful, and friendly towards customers (Baker et al., 2002; Dabholkar et al., 1996). A friendly interaction could be in the form of listening to the customer, being patient to address their complaints, and ensuring that all return issues are reconciled in a friendly manner (Collier, 2006; Collier & Bienstock, 2009). Most recently, research finds that the degree of salesperson friendliness in the shopping phase impacts the subsequent return events (Ertekin et al., 2020). While these findings are based on customer purchases, they hold true when customers make returns at the physical store, as positive staff behavior increases customer satisfaction with service and purchase intention (Ertekin, 2018).

A retailer service employee normally works as a facilitator of returns management by informing customers of returns information such as policies and product tracking, and then helping them process returned products. A retailer's service employee carries out important information relevant to a customer's needs (Davis-Sramek et al., 2010). In terms of the returns process in omnichannel, the core tasks of a retail employee include being knowledgeable about both products and the returns policies, and handling product returns (Maxham et al., 2008). Without a mastery of product knowledge and policy familiarity, service employees might convey inappropriate information relevant to customer needs and, subsequently, lead to customer dissatisfaction. The

qualitative analysis finds that existing retail service employees still work in a traditional service mode and lack a well-rounded knowledge of omnichannel service. Within a new retail environment constituted of high consumer expectation and fierce competition, it is critical to offer equivalently high service by elevating service employee expertise.

Service employee's expertise affects customer attitudes toward repeat purchases (van Dolen et al., 2002). In the age of impatience (Daugherty et al., 2019), increasing customer expectations require that staffing, expertise training, and customer interactions work together faultlessly. In line with existing literature, the qualitative analysis reveals the urgency of elevating the competency of retail store managers and retail associates, especially in handling returns. Ellinger et al. (2008) reveal that employee development practices can enhance employee and organizational performance by reinforcing the values and service culture of the organizations. Service-related training is the systematic, formal process of attempting to develop employee's customer service knowledge, skills, and abilities (Ellinger et al., 2008; Davis et al., 1998). Hence, productive training of personnel is called for to prepare retailers to serve the customers better.

5. Managerial Implications

We contribute to the literature via a rich empirical study of omnichannel practice in the U.S. retail section. This study identifies a range of new dimensions for retail returns management within the context of omnichannel retailing. Our findings of the study offer a number of implications for practitioners.

Retailers need to align their returns, refund, and exchange policies throughout the omnichannel to inform customers of their benefits as inconsistent policies among different channels could lead to customer uncertainty. Retailers should revisit policy positions on all channels. The alignment of policies across all channels enables customers to have a seamless

return experience in an omnichannel retail setting. For the retailer, aligning their policies in an omnichannel retail setting also helps them avoid reduced gross margins because customers may find ways to take advantage of this misalignment for their benefit.

Customers expect the retailer to provide visibility and traceability for the product refund in the return event, which are the two dimensions of the transparent return policy as previously denoted. Achieved transparency could help customers understand retailers' operations and reduce friction in the returns process. Increased retailer operation transparency can also impact other supporting aspects of supply chain management, such as risk management, as firms attempt to avoid the negative consequences of actions in the extended supply chain (Spekman & Davis, 2004). In addition, transparency can be leveraged to help retailers combat opportunistic customer segment returns, who take advantage of lenient return policies by purchasing items with the intend of using and returning them within the return window (Ulku and Gurler, 2018). Traceability of transactions improves the identification of bracketing, which allows retailers to customize returns policies for opportunistic customer segments. Furthermore, without traceability of the transaction, the policy of not having to have a receipt to return an item forces the retailer to reimburse the customer at the current price rather than at the price the customer purchased the product. Hence, retailers must provide technology that leverages the information across the entire retail enterprise to achieve transparency.

Store associate incompetence is another significant barrier to omnichannel returns management success. Service employees are required to provide an elevated level of service to consumers within forward and reverse channels. The role of store associates evolves from merely providing information to providing engagement with customers. In other words, omnichannel retailing requires retail store associates to have an even higher degree of customer service skills

than in traditional retail models. Retailers should consider making necessary training investments to enable their store associates to perform all these tasks effectively and efficiently.

The role of the physical store is evolving with the development of omnichannel retailing. Additional functionalities are added to physical stores within forward and reverse channels. Customers can order products online and pick them up in nearby physical stores and/or return the products bought online to the physical store (Gallino et al., 2017). The cross-channel fulfillment strategy helps retailers move store inventory fast and save sales losses (Gao & Su, 2017a). More importantly, the cross-channel fulfillment may save both consumers and retailers the shipping fee and delivery cost, which is to be regarded as a burden for retailers. Thus, the physical store should be leveraged as a strategic asset in the omnichannel retail environment.

We suggest that our results are generalizable to those retailers with similar product categories, such as apparel and footwear, and located in geographies where omnichannel retailing are maturing, such as North American markets. Our research is exploratory, and further research is required to develop and test hypotheses drawn from our refined construct. Specifically, further work is needed to understand how factors influence customer's shopping behavior in omnichannel retailing.

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Part Two

1. Introduction

The omnichannel supply chain is rapidly developing in today's business world, supported by the availability of information technology (Xu & Jackson, 2019). With supply chains throttled and customers asked to shelter in place, the retail industry is undergoing a fundamental, functional shift. A survey exploring consumer behavior in the U.S. before and during the COVID-19 crisis revealed that individuals have significantly increased their online shopping use (Andrew et al., 2020). The increased focus on social distancing will encourage continued online shopping. These shifts will likely persist in the post-pandemic future, reinforcing behavioral changes over the longer term. Meeting the demands of this increasingly new consumer shopping behavior accelerates retailers' transformation to embrace the omnichannel experience in its true sense (Shah, 2021). According to McKinsey (2021), ten years of e-commerce adoption was compressed into three months during the pandemic.

Within the realm of omnichannel retailing, retailers provide customers access to all available channels and give them a unified shopping experience across them (Verhoef et al., 2015; Ailawadi & Farris, 2017). The retail environment evolves from multichannel to omnichannel by removing the separation of channels to provide an integrated, seamless customer experience (Verhoef et al., 2015). Retailers adopting omnichannel strategy offer customers multiple purchase channels and return channels. Purchase channel forms include traditional B&M, online channels, and blended channels, such as buy online pick up in-store (Verhoef et al., 2015), while returns channels encompass returning products to the B&M store, ship-to-retail store, and ship-to-warehouse/distribution center (Bell et al., 2014). Retailers are experimenting with innovative e-commerce strategies to cater to changing customer expectations (Shah, 2021).

While omnichannel retailing offers convenience to customers with maximum shopping flexibility, implementing and operating an omnichannel strategy adds challenges and complexity to a supply chain and retailers (Verhoef et al., 2012). Omnichannel strategies come in a wide range of forms to achieve fulfillment and distribution, as well as inventory and capacity management (Melacini et al., 2018). Kembro et al. (2018) emphasize that the scope of omnichannel strategies should include more retail-oriented strategies such as channel management, return management, and the role of retailer stores in product handling. Omnichannel retail stores are leveraged as both fulfillment and returns locations for online orders (Ishfaq et al., 2016a) and in light of this shift from the traditional model, retailers need to develop and leverage the capabilities required to fulfill consumer orders and returns from different touchpoints through the physical stores (Strang, 2013). For example, Walmart has introduced a mobile app to speed up the returns process for online purchases when returning to a retail store (Rosing, 2018).

One major mission of an omnichannel strategy is to enable a seamless customer experience. Good customer experience is deemed to help build long-term customer relationships and increase sales (Solomon, 2018). Previous literature has shown that customer experience significantly impacts retail sales, satisfaction, frequency of shopping visits, profitability, and word of mouth communication (Bagdare & Jain, 2013; Grewal et al., 2006; Verhoef et al., 2009). Bagdare and Jain (2013) conceptualize retail customer experience as "the total of cognitive, emotional, sensorial, and behavioral responses produced during the buying process, involving an integrated series of interaction with people, objects, process and environment in retailing" (p. 3). Bagdare and Jain's findings indicate that the in-store customer experience is critical to creating and maintaining stable customer-retailer relationships. A favorable in-store customer experience motivates customer willingness to maintain the relationship with retailers and serves as a strong predictor of customer

satisfaction and loyalty to the store (Klaus & Maklan, 2013; Bustamante & Rubio, 2017). Bustamante and Rubio (2017) emphasize that customer experience is a crucial element by which retailers differentiate themselves from competitors and improve customer engagement.

In practice, retailers are constantly seeking more interaction with customers through multiple touchpoints and channels intended to boost retail sales (Bell et al., 2015), such as returns management. Retailers and customers, however, have very different views of returns. Retailers and customers have different views of returns. Customers see them as an extension of the follow-up shopping experience, while retailers view returns management as necessary evils (Daugherty et al., 2019; Morgan et al., 2018; Wang et al., 2017; Rogers et al., 2012; Richey et al., 2011; Petersen & Kumar 2009). Hence, effective returns management is critical for omnichannel retailers to enhance customer perception of post-sale services, which further impacts customer perception toward the retailer and repurchase intentions (Xu et al., 2017a; Ramanathan, 2011).

In comparison with traditional forward logistics, returns management is more challenging in omnichannel retailing due to the uncertainty of product returns (Rogers & Tibben-Lembke, 2001; Daugherty et al., 2001; Richey et al., 2004) and customers' return channel preferences (Xu & Jackson, 2019). Compared with studies focusing on the management of the forward supply chain in an omnichannel retail setting (Ishfaq et al., 2016; Wollenburg et al., 2018), reverse supply chain and returns management studies are largely underexplored (Bernon et al., 2016).

Daugherty et al. (2019) highlight that it is critical to understand how customers' needs change over time and create a customer experience that customers value. The qualitative analysis reveals four capabilities that retailers need to satisfy customer expectations and preferences in the retail stores' returns process: transparent returns policy, transparent loyalty program capability, reverse logistics procedural capability, and frontline employee interactional capability. This study

aims to extend the understanding of retail store roles in the omnichannel retailing environment, provide retailers with guidance on how to create an engaging in-store customer experience during returns, and leverage retail stores as one returns strategy to boost retail sales.

This research specifically investigates to what extent consumer's repurchase behavior varies based on retailers' capabilities, namely: transparent return policy capability, transparent loyalty program capability, reverse logistics service capability, frontline employee interaction capability. Our study's central tenet is that a transparent return policy and a transparent loyalty program disclosure serve as logistics service quality signals in the returns process. The valuation of a retailer's disclosure efforts, as perceived by consumers, varies with the disclosure of the extent and nature of a retailer's transparency capability. Accordingly, we adopt signaling theory as our primary theoretical lens to develop a set of hypotheses relating retailers' transparency capabilities to consumers' logistics service quality perceptions and repurchase behaviors. We utilize justice theory as our second theory to develop hypotheses relating customers' perceptions of fairness in the returns process to repurchase behaviors. We test these hypotheses by conducting vignette-based, role-playing experiments with Turk Prime panel participants and college students.

Our study provides an opportunity for omnichannel retailers to understand customers' perceptions and needs in the return process and improve their offerings and supply chain management integration to increase customer demand. Our research contributes to both the academic literature and managerial practice in the following ways: First, our exploration of the effects of disclosing information on consumer repurchase behavior adds to supply chain transparency literature and complements prior research on the benefits of disclosing information to consumers' repurchase intention and actions. Second, our findings contribute to the literature regarding operating logistics networks in an omnichannel context to serve customers across

channels. Omnichannel retailers have started using their physical stores to serve customers in non-traditional ways, such as using stores as order fulfillment locations where customers can collect their online orders (Ishfaq et al., 2016) and return items purchased online. By understanding the key characteristics that impact a customer's choice of the channel within an omnichannel retailing setting, retailers can then better structure their omnichannel supply chain to meet their customers' needs and expectations. By so doing, the integrated returns management system can be developed in omnichannel retailing to minimize the costs of returns management.

From a managerial perspective, the intended outcome is a strong understanding of the physical stores' returns processes and physical stores' realignment efforts that advance retailers' omnichannel capabilities. Our results highlight the need for retailers to not only provide a lenient returns policy and loyalty program, but also proactively communicate this information with consumers in the returns process. Innovating returns strategy help alleviates customer fear in the returns process and ensures a value-driven customer experience.

The layout of this paper is as follows: Section 2 gives a brief review of the related literature, and section 3 introduces the theoretical background. We then further integrate the theories into our hypotheses development in section 4. In section 5, we describe the methodology of our study and present the data analysis procedure. Finally, we draw conclusions, present limitations of our study, and propose future research areas in sections 6 and 7.

2. Literature review

Empirical evidence of in-store returns experience indicates the four main categories of literature related to our research and are reviewed in this section.

2.1 Transparent returns policy

The returns policy has long been considered as one factor impacting customer returns. Retailers provide lenient return policies not only because they signal high product quality but also because they act as risk relievers for consumer purchasing decision processes (Ulku & Gurler, 2018). Existing research has focused on the role of returns policy leniency in the prepurchase phase. Five dimensions of returns policy leniency have been defined as time leniency, monetary leniency, effort leniency, scope leniency, and exchange leniency (see Table 4) (Janakiraman, et al., 2016). Wood (2001) investigated the effect of the retailer's returns policy on consumer order decisions and showed that the returns policy leniency helps consumers reduce their product search time and increase purchase probability, with further research revealing that consumers regularly check the returns policy before making a purchase (Brill, 2015). A vast majority of studies investigate the influence of returns policy with the assumption that the returns policy does not directly impact a customer's post-purchase valuation of the transaction (Abdulla & Katzenberg, 2019).

Table 3
Return policy leniency (Janakiraman et al. 2016)

Return policy leniency dimension	description
Time leniency	Return policies that provide a longer length of time in which to return products are regarded as lenient.
Monetary leniency	The lenient return policy allows for a refund of the full monetary amount paid for the product, no restocking fee and shipping fee imposed.
Effort leniency	Consumer effort required to execute returns varies, with some retailers creating "hassles" for customers returning products (e.g., requiring the original receipt, tags, or product packaging be retained). Return policies requiring less effort on the part of consumers are considered more lenient.
Scope leniency	Store limit items they consider "return-worthy." For example, a product purchased on sale may not be eligible for return. Return policies with a greater scope of "return-worthy" items are considered more lenient.
Exchange leniency	While some retailers offer a cash refund, others offer store credit or product exchange for the returned item. Return policies that allow cash refunds are considered more lenient.

However, Ulku (2013, 2018) points out that consumer valuation on returns policy is uniformly distributed through the length of the return window set by the retailer. Xu et al. (2014) use an analytic model to investigate the effect of the length of returns window on consumers' valuation of purchase and find that consumers' valuation of merchandise ends after the return deadline. In other words, customer evaluation of returns policy lasts from the prepurchase phase to the passing of the return deadline. Customers review the returns policy before purchasing a product to decrease their risk and assure themselves of having a smooth return if they are not satisfied (Ulku & Gurler, 2018), thus making the returns policy part of their purchase decision. When consumers make a return at the B&M store, the consistency of returns policy execution works as the last step of consumer evaluation of their purchase. In the qualitative analysis, we find that consumers are sensitive to the inconsistency of returns policy on different channels as they have checked the returns policy prior to the purchase. To mitigate the uncertainty caused by the inconsistency, retailers can communicate returns policy information to consumers in the returns process to enhance their perception of reverse logistics service quality. Existing research reveals that supplier transparency increases customers' perceptions of value and satisfaction with the supplier (Eggert & Helm, 2003). In the food industry, process transparency proves to be positively associated with service quality and efficiency (Buell et al., 2017). In a similar vein, retailers can improve customer's perception of value and satisfaction by increasing their process transparency.

Morgan et al. (2018) has conceptualized supply chain transparency as “reporting to and communicating with key stakeholders to provide traceability regarding the history of the product and visibility about current activity throughout the supply chain while also incorporating stakeholder feedback for supply chain improvement” (p. 4). As an indispensable component of the supply chain, retailers can enable visibility in the returns process by making information about

various aspects of returns available to customers utilizing the organization's information. Meanwhile, retailers can enable traceability by providing consumers with the activities of the returned product throughout the whole supply chain.

2.2 Transparent loyalty program

Loyalty programs are designed to strengthen the commitment to a brand (Uncles et al., 2003). Retailers adopt loyalty programs to reward and encourage repeat patronage (Henderson et al., 2011; Brashear-Alejandro et al., 2016). Loyal consumers tend to buy products more often (Jacoby & Chestnut, 1978), facilitate cross-over effects to other products or services (Uncle et al., 2003), generate favorable word-of-mouth (Sundie et al., 2009), and are more willing to pay a price premium (Reichheld & Teal, 2001). Uncles, Dowling, and Hammond (2003) described that loyalty programs could be seen as “vehicles for maintaining customer loyalty or for maintaining brand share.”(p.303). Customer loyalty programs constitute the integrated system of marketing actions that reward loyal customer behavior with incentives and benefits (Brashear-Alejandro et al., 2016). These benefits work together to impact customers’ buying habits and improve customers’ relationships with the company (Henderson et al., 2011). Naturally, companies that offer loyalty reward programs believe that their programs have a long-run positive effect on customer evaluations and behavior (Bolton et al., 2000). A properly executed loyalty rewards program expects to intensify relationships and stimulate customer loyalty by increasing usage of the company's product or service offering (Leenheer & Bijmolt, 2008).

However, if loyalty rewards programs elevate relationship durations and usage levels, customers will be increasingly exposed to the complete variety of service experiences, including experiences that may cause customers to switch to another provider. Wagner et al. (2009) find that loyalty is adversely affected when there is a reduction in loyalty program member status. A positive

experience can also lead to higher expectations, which are both harder to meet and can trigger more negative customer responses. As such, more retailers start to launch premium customer loyalty programs to meet the varying needs of different customer segments (Ankeny, 2016).

Research company Access Development (2017) reported that 79% of customers would take their business to a competitor within a week of experiencing poor customer service, which leads to a negative financial impact for any company. Firms may focus on stronger emotional bonds with customers by heightening overall value perception (Kang et al., 2015; Bolton et al., 2000). Offering transparent loyalty program information to customers who make returns at B&M stores provides an interactive opportunity for retailers to foster enduring retailer-customer relationships (Homburg et al., 2009). A transparent loyalty program might mitigate the perceived high efforts to enroll in the program (Demoulin & Zidda, 2009) or the complexities of the program itself (Noble & Phillips, 2004). As external stakeholders, customers attach and identify with companies through multiple interactions (Lam et al., 2010; Hughes & Ahearne, 2010). When customers become loyal to a loyalty program, their overall identification with the company may also increase. In turn, a loyalty program leads to stronger identification and prompts customers to build stronger ties to the company (Kang et al., 2015).

2.3 Retail reverse logistics service

Customer experience “includes every point of contact at which the customer interacts with the business” (Grewal et al., 2009, p. 1). Logistics service quality is foundational to the customer experience (Daugherty et al., 2019), and in the e-commerce age, direct contact with the customer enables retailers to create a customer experience. Stank et al. (1997) conclude that personal meetings with customers could impact customer satisfaction to a greater extent than the use of other formal feedback mechanisms, such as email and letters, which holds constant in omnichannel

retailing. Various aspects of the service interface (e.g., contact personnel, self-service technology, or co-creation/customization) can promote or inhibit the formation of in-store customer experience (Bustamante & Rubio, 2017). Bustamante and Rubio (2017) found that retailers need to provide memorable shopping experiences to retain and attract new customers in physical stores. In the omnichannel environment, the customer's returns experience is as important as the product's original delivery for an omnichannel retailer to create a service experience, since contact with a retailer's service provider is remembered and influences customers' future buying behavior (Daugherty et al., 2019).

Scholars tend to agree that returns experiences affect follow-up loyalty intentions with a retailer (Wood, 2001; Mollenkopf, Rabinovich, Laseter, and Boyer, 2007; Janakiroman et al., 2016). Quicker refunds on merchandise returns result in increased follow-up spending (Griffis et al., 2012). Retailers offer a liberal returns policy for various reasons, including a desire to remain competitive in the marketplace (Rogers & Tibben-Lembke, 1999) and maintaining a positive image in the minds of the customer (Wang, 2009). In the light of available returns experience literature, retail service quality is closely related to operational efficiency and effectiveness. In the omnichannel era, the measurement outcomes of logistics-derived customer value emphasize the concepts of "better, faster, cheaper, closer" (Christopher, 2011, p. 228). The challenge is how to respond to customer requests and demands, covering an array of service-related issues (Daugherty et al., 2019). Escalating service expectations place extensive pressure on the retailer. Retailers' distinguish themselves from their competitors through their offers of customer experience and how they achieve superior service quality in a shorter time-frame at less cost. Therefore, reverse logistics customer service is more critical than ever in support of retailing in an omnichannel era.

2.4 Frontline employee capability

Employees have been identified as an organizations' greatest asset (Broadhurst, 2012), and numerous employees are involved in processing returns. Literature suggests that retail service employees are essential facilitators in returns management (Daugherty et al., 2019; Chen et al., 2019; Govindan & Bouzon, 2018). As a key stakeholder in retailing, employees perform various tasks in different processes, execute all the operational strategies and planning, and represent the company through daily interactions with customers at the front end of the business (Chen et al., 2019). Effective returns resolution requires employees to be professionally trained (Stock et al., 2006), as prompt resolutions through well-trained personnel are a crucial component of the overall return experience (Griffis et al., 2012). Personnel with a problem-solving attitude for service recovery can provide positive customer experiences to increase repeat business and generate new customers, translating returns into a more value-adding activity through more sales (Autry et al., 2007, Mollenkopf et al., 2011; Chen et al., 2019).

The growing prevalence of omnichannel retailing has increased the complexity involved in returns management, and the development of skilled returns management employees is becoming a competitive necessity (Chen et al., 2019). The information needed for returns management employees may include completed product information, technical specifications, state of inventory level, customer requirements, and so on (Chouinard et al., 2005). Returns management employees should know suppliers, manufacturers, product specifics, and production processes while understanding their customers' needs in making returns management. As emphasized by Chen et al. (2017, 2019), relevant employees need to be properly developed and trained with the necessary knowledge or skills in order to fully capture the value of the returned

products. Therefore, developing highly competent returns management employees is an important factor to successful returns management.

Physical store returns require intense customer interactions and are completed in a short time period. The employee's response to returns plays a critical role in customer satisfaction and retention (Ertekin, 2018). Chen et al. (2019) highlight that properly trained and prepared employees are essential to providing a hassle-free product returns service. Unlike an initial purchase, a return might contain additional product fit information, and employees' competence should be critical to serving the customer and generating their desired response from a return experience (Ertekin, 2018). Research has supported that well-trained employees can protect and promote relationships with customers given the necessary knowledge, skills, and abilities (Goldstein, 2003). Customers may perceive a returns experience as stressful (Autry et al., 2007) and anxious (King & Dennis 2006), so when returning a product, how customers are treated has a huge impact on repeat sales (Burnson, 2014; Starbuck, 2017). Furthermore, customers' expectations of service brought about by omnichannel retailing continue to rise over time in the age of impatience (Daugherty et al., 2019). Returns management employees' competency is crucial in handling returns and creating customer experience.

3. Theoretical foundation

The theoretical background of this study relies on two well-referenced theories: signaling theory and justice theory.

3.1 Signaling theory

Signaling theory is the primary theoretical lens through which we examine the impact of retailers' transparent return policies and loyalty program disclosures on consumer's repurchase behavior. Signaling theory addresses the reduction of information asymmetry between parties

involved in a transaction via costly signals (Spence, 1974). In a typical signaling process, the signaler (e.g., firm, employee) sends costly and observable signals to the receiver (e.g., shareholder, consumers), such that the signaler forms and sends signals to reduce the asymmetry (Connelly et al., 2011a). The signal communicates a specific quality about the signaler that would be ambiguous to the receiver, and the receiver observes the signal and interprets it (Connelly et al., 2011a; Cheng et al., 2018). At the essence of signaling theory, signalers are denoted by Connelly et al. (2011a) as "insiders who obtain information about an individual, product, or organization that is not available to outsiders" (p. 44). Correspondingly, the receivers are "outsiders who lack information about the organization in question but would like to receive this information" (p. 45). In a signaling model, the signalers have a privileged perspective over receivers by having private information about the underlying quality of some aspect of the individual, product, or organization.

There are two basic requirements of a valid signal: observability and signal cost. These two key features can set high-quality signalers and lower quality signalers apart (Spence, 2002; Certo, 2003). Signal observability refers to "the extent to which outsiders are able to notice the signal." (Connelly et al., 2011, p.45). Observability is a necessary but not sufficient characteristic of a signal (Connelly et al., 2011). Signal cost represents the second characteristic of an efficacious signal. The notion of cost in the signaling context involves the fact that some signalers are in a better position than others to absorb the associated cost (Connelly et al., 2011). Being observable ensures that the receiver can observe the signal, and being costly to imitate ensures that only high-quality signalers will be able to send them consistently (Chung & Kalnins, 2001). For instance, suppliers use their good reputation as signals to demonstrate their credibility to potential buyers (Wagner et al., 2011). It has also been suggested that customers interpret returns policy leniency as a signal of a seller's overall quality (Bonifield et al., 2010; Rao et al., 2012). Moorthy and

Srinivasan (1995) explore how a high-quality retailer can adopt a money-back guarantee to signal product quality and differentiate from a low-quality retailer. These studies suggest that signaling theory can provide a lens of study if retailers' information in the returns process can reduce information asymmetry between the retailer and the customer concerning the returns service quality and further differentiate high-quality retailers and low-quality retailers.

A signal is useful for reducing information asymmetry when it is profitable for the high-quality retailers to send, but unprofitable for the low-quality retailers (Milgrom & Roberts, 1986). High-quality retailers have an incentive to send a signal, and low-quality retailers are discouraged from choosing the same signal. The use of signal then separates different quality retailers (Boulding & Kirmani, 1993). Because signaling seeks to convey information to customers in the retailing setting (Schlosser et al., 2006), it is essential to take customers' information needs into account when considering the effect of signaling. Customers who have a greater need for information are likely to be more strongly affected by signals (Pee et al., 2018). Brill (2015) finds that 66 percent of online customers pay attention to the returns policy when making purchase decisions. In the B&M returns process, most of the returns policy is not observable to the customers. If consumers did not routinely check return policies prior to making a purchase, then the returns policy's visibility in the returns process will mitigate the interference between the signal and the consumer. Retailers who use the returns policy as signals of service quality would like to send unambiguous signals to their target markets.

High-quality retailers may use signals to separate themselves from their low-quality counterparts to alert customers to their competitive advantage. To attract consumers and reveal their service quality, high-quality retailers will display their returns policy terms in a straightforward way. For instance, retailers may provide concise written directions for customers

to reference in regard to refunds, exchanges, and merchandise credits at physical stores. In doing so, transparency through the observability of the returns policy can work as a valid signal to eliminate confusion and expedite the handling process. High-quality retailers can offset the increased cost of offering transparent return policies with increased revenues from consumers (Bonifield et al., 2010; Heiman et al., 2001). For low-quality retailers with low-quality merchandise, it is costly to imitate the same signal. The increased transparency of returns policy would likely yield a higher merchandise-return rate, resulting in a higher cost of returned merchandise, which cannot be offset by increased revenue from customers' repurchases (Jiang & Zhang, 2011).

Having established a signal's characteristics, the study now considers the returns process at physical stores as a signaling environment. We now use two indices to understand the signal's quality: clarity and intensity.

Signal clarity

Extant research finds that an effective signal should be observable and clear (Certo et al., 2001) so that customers can easily capture it (Spence 1973, 1974). This study proposes that retailers send an observable and clear signal by presenting the return policy and loyalty program information during the return process. For example, retailers may provide another screen for customers to show up their loyalty program information and corresponding order information at the store. In doing so, the customers will quickly grasp how retailers handle their returns. A clear understanding of the retailer's returns management strategy will encourage customers to assess retailers' reverse logistics service quality.

Signal intensity

Scholars suggest that frequent communication of signals is likely to capture the audience's attention (Riley, 1975; Spence, 2002; Gao et al., 2008). Retailers need to consistently communicate multiple signals from different dimensions and show little contradiction across them. A simple and unidimensional signal is not strong enough to enhance retailers' transparency credibility. The customer will grasp the signals and subsequently use them to infer retailers' reverse logistic service qualities in the retailer-customer relationship management context.

Having identified credible signal characteristics, how can a retailer determine whether it has been successful in signaling transparency from return experience? Whether consumers will appreciate the signals offered in the returns process, we examine the effect of signals on customers' perceptions of retailers' reverse logistics procedural capability.

3.2 Justice theory and its dimensions

Justice theory emphasizes the perceptions of fairness within the relationship (Greenberg, 1990). Research reveals that customers are sensitive to fairness perceptions in various social and economic transactions (Maxwell, 2002). People are more likely to perceive decisions as legitimate if they view the decision-maker as providing fair procedures, see the decision-maker as interpersonally fair, and believe they have fair access to all relevant information (Colquitt, Greenberg, and Zapata-Phelan 2005; Tyler, et al. 1997). Justice theory has received much attention from academia as a theoretical framework for service recovery (Colquitt, 2001; McColl-Kennedy & Sparks, 2003; Rupp & Spencer, 2006; Ha & Jang, 2009). Research shows that customers' future behaviors rely upon whether they perceive themselves as treated fairly (McColl-Kennedy & Sparks, 2003; Ha & Jang, 2009; Jung et al., 2017). Prior research identifies four types of justice customers use to evaluate their fairness of how they are treated: distributive justice, procedural justice, Interactional justice, and Informational justice (Colquitt, 2001).

Distributive justice refers to the perceived fairness of the outcome received (Kumar, 1996; Griffith et al., 2006; Duffy et al., 2013). It is defined as rewards and outcomes received that should be comparative to respective inputs and contributions (Colquitt, 2001). Kumar (1996) also refers to this as the fairness of the economic price or outcomes actually achieved. When the result is deemed fair and the distribution of rewards over time is acceptable, the exchange partner views the relationship as beneficial and reciprocates via additional input (Griffith et al., 2006). Conversely, one party who feels they are being treated unfairly in terms of the actual outcome or input/output ratio may attempt to restore the balance by decreasing outputs, altering outcomes, or withdrawing from the relationship.

Procedural justice reflects perceptions of processes and criteria used in arriving at the outcomes (Leventha, 1980; Blodgett et al., 1997; Johnson et al., 2014). This form of justice generally includes formal policies and structural considerations related to service recoveries, such as timeliness, responsiveness, and flexibility during the recovery process (McCull-Kennedy & Sparks, 2003; Ha & Jang, 2009; Richey et al., 2021). These criteria are also associated with overall service quality (Parasuraman et al., 1985; Ha & Jang, 2009).

Informational justice is conceptualized as “providing explanations or accounts for decisions made, with decisions or procedures deemed fair if the basis for the decision can be explained and justified in a candid and truthful way” (Duffy et al., 2013, p. 3). Informational justice focuses on conveying information about why procedures are used in a certain way or why outcomes are distributed in a certain fashion (Greenberg, 1993). In other words, informational justice provides an understanding of why things happened as they did. It reflects the fairness of the explicit explanations and justifications provided about decisions (Ambrose et al., 2007). In the context of retailer-customer relationship management, informational justice depends upon the

extent to which a retailer provided the customer with an adequate explanation of their request (Colquitt, 2001) so it is clear how the retailer can help the customer. Informational justice may include revealing important information, making it easy for retailers to satisfy customer needs (Spencer & Rupp, 2009).

Interactional justice refers to the perceived fairness of the interpersonal treatment shown to others when procedures are implemented and outcomes are allocated (Johnson et al., 2014). In the service context, interactional justice elements may include treating people with dignity and respect and providing appropriate explanations for service failure (McColl-Kennedy & Sparks, 2003; Ha & Jang, 2009). In the frontline context, interactional justice may reflect how customers are treated with politeness, dignity, and respect by others involved in executing procedures or determining the outcome. This is an important component of fairness as interpersonal treatment received during the decision-making procedure impacts an individual's reaction to decision outcomes (Duffy et al., 2013).

3.3 Theories combination

The returns experience is a phenomenon that takes place in the presence of established relationships between retailers and customers. The theoretical explanation of the event requires theories that can explain the internal workings of the interaction between the retailers and customers, and the resources to generate their relationship's expected performance. Retailers expect to sustain a long-term relationship with customers by providing outstanding service. In turn, customers patronage retailers with positive word-of-mouth and purchases (Reynolds & Beatty, 1999).

When consumers and retailers interact during the returns process, an extensive amount of information exchange takes place between them (Gohary et al., 2016). This information can be

related to the employee's manner, the process of dealing with the return, the perseverance to solve problems, and the offer of alternative options. Typically, customers analyze this information to evaluate and decide whether they are satisfied with the retailer's returns or complaint handling process. The dimensions might include timeliness, responsiveness, and flexibility, which are in line with dimensions supported by both procedural and interactional justice (Greenberg, 1990).

Perception of fair treatment at the individual level of interaction is posited to result in increased positive behavior outcomes (Duffy et al., 2013). Within the returns management context, returns management employees must deal with the uncertainties associated with product returns in terms of quantity, condition, timing, etc., understanding customer expectations as to how they want to be able to return a product, what constitutes an acceptable level of effort necessary to make a return, and the length of time to process a return. Customer contact employees are key to delivering quality, value, and customer satisfaction which affects retailer sales (Orr et al., 2011). In line with the stakeholders involved in interactional justice, the in-store returns experience could be explained by measuring customers' perception of their interpersonal treatment.

Perceptions of procedural fairness are formed by customers comparing procedures to what they expect to receive or a reference procedure. Such reference procedures are largely based on past transactions or knowledge of alternative offerings from other retailers (Xia et al., 2014; dos Santos & Basso, 2012). The hesitance to patronize a retailer is based on the customer's assessment of whether the societal standards of fairness justify the proposed procedure. Suppose the retailer makes changes from the reference procedure that are not justified. Customers may view this as unfair and less willing to purchase from that retailer. When the procedure goes beyond an established reference, the question is whether customers will perceive the procedure change as justified in terms of the retailer's ensuing profit.

Aside from using justice theory to examine the retailer's reverse logistics service's fairness during the returns process, we use signaling theory to explain how to leverage service quality in the returns process from the customer's perspective. Mentzer (2000) reminded us that "understanding how customer's logistical needs change over time is a key component to predicting what customers may value in the future" (p. 41). As Daugherty et al. (2019) denote, "it is important to know your customers, what their expectations are, and to create a customer experience that matches customers' needs." (p. 22). In today's competitive retail environment, it is hard for retailers to differentiate themselves by product assortment alone. Increased competition motivates retailers to focus more strongly on service quality (Beitelspacher et al., 2010; Bolton et al., 2000). Carman (1990) argues that the capabilities to deliver high-quality service to customers consistently enable retail organizations to gain and maintain a competitive advantage. Hence, retailers need to examine and identify organizational resources to create superior service competencies (Richey et al., 2007) and achieve higher retention-related customer-service levels (Beitelspacher et al., 2010). Based on our qualitative analysis, transparent returns policy capability and transparent loyalty program capability are both employed to investigate customers' repurchase behaviors.

The combination of justice theory and signaling theory provides a more compelling explanation of returns process interactions between retailers and customers than either theory can explain individually. In combination, signaling theory and justice theory create a theoretical foundation for understanding the performance resulting from the creation of an omnichannel retail returns strategy.

4. Hypothesis development

4.1 Direct effect: Transparent return policy

We first hypothesize that retailer's disclosure of the returns policy will affect consumers' perceptions of reverse logistics service procedural justice. A transparent return policy refers to whether retailers reveal their return policy and satisfy customers' refund and exchange requests during the returns process, such as retailers providing concise, written directions regarding returns time window, refunds, exchanges, etc. for customers to reference when making returns. As consumers are concerned about the frequency and consequence of returns, unsatisfied returns or a vague return experience will increase their uncertainty of retailers and affect their shopping behavior. Judge and Colquitt (2004) and Grandey (2001) argue that information sharing can significantly affect congruence among people. Consumer perceptions of procedural fairness may depend on revelations about the process retailers use to process the return. Typically, consumers do not have full access to information retailers use to determine a return's legitimacy. One might argue that keeping such information from consumers or excluding them from the decision-making process underlies a belief that consumers may not know what's best for them or would not make the 'right' decision. However, the retailers' returns handling should be consistent throughout the shopping experience at different stages and viewed as compatible with the customer's ethical value.

The transparent return policy will increase customers' confidence in a retailer. Given that a customer observes the whole return process, they may possess increased familiarity and confidence in it. This is in line with Taylor's (1974) argument that as consumers get more handling information about a process, they become more comfortable with it. In the omnichannel retailing context, this comfort comes from knowing that the customer has a complete understanding of the returns process because of transparency. This historical knowledge should then create perceptions

of reduced risk and enhanced justice. In contrast, an opaque return policy may trigger ambiguous considerations since it might focus only on the retailer's profit. Although a transparent return policy is not a panacea, research suggests that including the customer in the decision-making process and providing information about how an organization reached its decisions can lead to stronger decision acceptance (Thibaut and Walker, 1975; Tyler 1989, 2000). Therefore, a transparent returns policy will have a greater effect on consumers in terms of their perception of reverse logistics service quality.

Hypothesis 1:

A transparent returns policy will be positively associated with a consumer's perception of procedural justice in the return process.

4.2 Direct effect: Transparent loyalty program

Signaling effectiveness can be enhanced by sending more observable signals or increasing the number of signals (Janney & Folta, 2003; Connelly et al., 2011). In the omnichannel retail context, information that is available to both retailers and customers is changing. Retailers can differentiate themselves in regard to service quality among competitors by repeatedly signaling. Signaling strength can increase the signaling process's effectiveness (Balboa & Marti, 2007, Connelly et al., 2011). Retailers need to consistently communicate multiple signals from different dimensions and show little contradiction across them. Scholars suggest that frequently communicated signals are likely to capture the customer's attention (Riley, 1975; Spence, 2002). Customers will grasp the signals and subsequently use them to infer their perception of service procedural fairness. The retailers need to show consistent evidence of fit between signal dimensions and signal credibility in order to establish service quality.

Customized loyalty program information will serve as another signal in the returns process. A loyalty program can be defined as an integrated marketing system that aims to make member customers more loyal (Leenheer & Bijmolt, 2008). The retail strategy has moved toward a relational perspective with the customer rather than focusing on the product (Sheth et al., 2000). A loyalty program creates a competitive advantage by keeping current customers rather than attracting new customers (Leenheer & Bijmolt, 2008). A retailer pursues this objective by developing a deep understanding of their customers' needs, tailoring their offering to these needs as closely as possible, and giving continuous incentives for the customer to concentrate most of their purchases with them (Day, 2000). Leenheer and Bijmolt (2007) point out that loyalty programs enable retailers to identify individual customers, determine their profitability, and differentiate between them by giving personalized incentives and rewards. Noble and Phillips (2004) conclude that customers are more likely to value a loyalty program if they anticipate receiving frequent positive reinforcements from it.

However, research also indicates that retailers struggle with using the collected loyalty information in a meaningful manner (Leenheer & Bijmolt, 2008). Loyalty programs contribute to customer databases, but retailers often underuse available information sources or even hardly use them at all (Reinartz et al., 2004; Verhoef et al., 2003). A more effective loyalty program design should provide comprehensive loyalty incentives, such as elite clubs, targeted actions, etc. (Leenheer & Bijmolt, 2008).

Technological advancements have altered retailer-customer communication patterns (Kumar, 2010; Padhy, 2017; Daugherty et al., 2019). Information support for handling returns can positively impact service quality related performance (Daugherty et al., 2005). A holistic approach to communicating with the customer should begin with information about customers and involve

delivering the message, reviewing customer feedback, and delivering a retailer's response with feedback. With the availability of new data collection and processes, loyalty programs can seamlessly implement the customized customer messaging (Kumar, 2010), especially during direct contact with the customer at a physical store. Retailers may use loyalty programs to improve customer understanding and create higher customer value through differentiated offers (Leenheer & Bijmolt, 2008). Customers' needs and wants have become too diverse for retailers to satisfy them with a single, all-purpose approach, and this reduction in loyalty program effectiveness has encouraged the introduction of an enhanced version of the basic loyalty program format (Daugherty et al., 2019). Retailers may start with the information collected about their customers and use it to drive the differentiated and targeted message to customers. Integrating knowledge about customer needs across the growing number of channels and product category combinations is vital to companies' sustained existence (Kumar, 2010), and some retailers have started using third-party programs to monitor customer purchase/return behavior and reveal the practice through direct customer contact (Morgan et al., 2020).

As the customized and differentiated message is often focused on customer's needs and wants, the loyalty program's transparency revealed in the return process enhances customer understanding of the loyalty program's value. Communication through loyalty programs cultivates customer knowledge at the direct touchpoint. The updated returns data could enhance customer knowledge for the return in terms of better customer-specific insight into product preference, future shopping rewards, and returns information. The obtained transparency of the loyalty program in the return process enhances customer's perception of fairness and consistency. We, therefore, propose the following hypothesis:

Hypothesis 2:

A transparent loyalty program will be positively associated with a consumer's perception of procedural justice in the return process.

4.3 Direct effect: Reverse logistics procedural capability on customer behavior

Reverse logistics service has long been seen as an opportunity to build a competitive advantage (Daugherty et al., 2005). Superior service quality is considered to be one of the keys to developing and retaining long-term returns (Daugherty et al., 2005; Daugherty et al., 2019). Murfield et al. (2017) investigate the impact of logistics service quality on consumer satisfaction and loyalty in an omnichannel retailing environment. Using the return process to enhance a customer service rating is critical in support of retailing in an omnichannel and e-commerce era (Daugherty et al., 2016). Customers want handling and processing to be accomplished as quickly and smoothly as possible (Daugherty et al., 2005). Poor service and impatient customers can very easily translate to lost business (Daugherty et al., 2019).

In this study, we emphasize the perception of reverse logistics service quality, namely, how customers perceive the effectiveness and efficiency of the returns process. When the retailer is perceived to be consistent, methodical, and efficient to handle returns in a timely manner, it demonstrates the capability of providing reverse logistics service quality. Procedural justice may include formal policies and structural considerations related to service, such as the length of time required to receive a refund, as well as the responsiveness and flexibility displaying during the procedure (Ha & Jang, 2009; Chebat & Slusarczyk, 2005; McColl-Kennedy & Sparks, 2003). A retailer can enhance customers' perceptions of reverse logistics service fairness by providing information about the returns policy and procedure, applying policies consistently, clarifying decisions about any change in the omnichannel context, and handling problems fairly. Kumar et

al. (1995) conclude that one party's perception of its partner's procedural fairness has a strong effect on its willingness to invest in the relationship. It can be inferred that the perceived fairness of the returns process employed in determining these outcomes will influence the customers' desire for continuity of the relationship and affect the degree of the customer's long-term orientation.,

When mutual perceptions of procedural justice are high, both parties consider the relationship to be "fair play" (Luo, 2005). As the relationship continues, the confidence levels increase, which helps assuage fear of exploitation in the retailer-customer relationship. Following a similar vein, when customers perceive a high level of procedural justice, they know that a retailer's credibility protects their benefits well. Consequently, they are more willing to invest in and continue with the relationship. In brief, they are willing to re-patronage the same retailer through different channels. Kim et al. (2010) reveal that customers who are satisfied with services have significant positive tendencies to repurchase products and services in the future. Thus, when a customer perceives the retailers' reverse logistics service procedure to be fair, it is expected that the customer will exhibit higher levels of repurchase behavior in their relationship with the retailer. Therefore, we propose:

Hypothesis 3:

Customer perception of reverse logistics procedural capability will be positively associated with customer repurchase behavior.

4.4 Direct effect: Interactional capability on customer behavior

In prior research, salesperson competency and friendliness have been identified as directly influencing the returns rate because they are associated with conveying product-related

information. Such information is likely to reduce product valuation uncertainty prior to purchase (Ertekin et al., 2020). Interactional justice concentrates on fairness perceptions regarding interpersonal treatment (Bies & Moag, 1986; Colquitt, 2001). In the service context, Interactional justice refers to the degree to which people are treated with politeness, dignity, and respect by others involved in executing procedures or determining the outcome (Liu et al., 2012). For instance, the frontline employees need to work closely with the customer respectfully and politely in procedure handling. This justice component includes customer perceptions about employee empathy, courtesy, treatment, and the efforts to which they are exposed in order to solve the problem (del Rio-Lanza et al., 2009). Lin et al. (2011) conclude that interactions between employees and consumers during an online service recovery directly affect customer satisfaction and behavior. This logic suggests that interactional justice induces consumer commitment, enhancing the relationship quality between retailers and customers.

When frontline employees possess the capabilities necessary to help customers, they are positioned to effectively handle customers' needs (Jung et al., 2017), because the frontline employees have adequate information regarding how to best help customers and meet customers' needs during their interaction. The favorable interactional experience helps relieve any fear of uncertainty about customers' future behaviors, consequently promoting the customers' commitment to a long-term relationship. Buell, Kim, and Tsay (2015) conclude that customers better appreciate employees efforts and value the service more when they observe employees engaging in labor they perceive as a greater effort. Research suggests that when customers perceive respect and courtesy from frontline employees, they become more favorable to the retailer as a form of reciprocity for the fair treatment received (Ertekin 2018). Therefore, we propose that:

Hypothesis 4:

Customers' perception of frontline employee interaction justice is positively associated with their repurchase behavior.

4.5 Direct effect – Transparent return policy on customer behavior

Next, we hypothesize that transparent return policy in the returns process impacts consumers' repurchase behavior. When customers perceive that retailers provide sufficient information regarding their requests, such as exchanges and refund tracking, consumers will perceive the signaling strength to be greater because transparency about such efforts requires retailers to be cooperative and supportive during their interactions. Transparency through communication will induce confidence in the relationship's continuity (Anderson & Narus, 1990) and result in consumers holding more positive attitudes toward the retailer and higher purchase intention (Duan et al., 2019). Such behavior will help reduce information asymmetry, decrease each party's perceived uncertainty about the other's behavior, and promote specific investment in the relationship on the part of both parties. This, in turn, makes the customer more committed to the retailers, ultimately enhancing patronage loyalty.

When retailers provide an environment for returning products that satisfies customers, customers perceive less risk in making purchases (Bower & Maxham, 2006; Peterson & Kumar, 2009). The information received through the product return experience leads customers to feel as though there is less risk involved in the exchange, consequently making it possible for customers to continue the relationship with the retailer (Petersen & Kumar, 2009).

Hypothesis 5:

A transparent returns policy will be positively associated with customer repurchase behavior.

4.6 Direct effect: Transparent loyalty program on repurchase behavior

Milgrom and Roberts (1996) explicitly point out that, in general, a firm's highly visible and costly activities are an obvious example of signaling efforts. A transparent loyalty program capability requires retailers to adopt information technology across multiple channels to connect and analyze customer transaction information and present them with a customized loyalty program during the returns process. Prior research has established that consumers are sensitive to firm expenditure and perceive products from those firms putting forth greater effort and customized message costs to be of a superior quality. (Duan et al., 2020).

As the signal receiver's in omnichannel retailing context, customers perceive costlier signals to be associated with more credibility (Lee, 2001). To disclose loyalty program information for each customer, omnichannel retailers must expend additional efforts to build connections and maintain transparency, resulting in much higher associated signaling costs (Hartmann & Moeller, 2014). Such costly signals will be considered to be of higher quality (Lee, 2001), and as a result, the disclosure of a transparent loyalty program signals a retailer's willingness to enhance a superior returns experience, which has a greater impact on consumers regarding their attitudes and purchase intentions. We, therefore, hypothesize that:

Hypothesis 6:

A transparent loyalty program will be positively associated with customer repurchase behavior.

4.7 Moderating effect of Transparent loyalty program

We argue that higher customer perception of transparent loyalty programs enhances the positive relationship between the transparent returns policy and perceived reverse logistics procedural justice.

Customer service experience increasingly provides a potential means of differentiation for omnichannel retailers (Daugherty et al., 2019). A significant component of creating the customer experience is communicating with the customer, especially during direct contact. Credible communication helps retailers reduce the information asymmetry between retailers and customers (Connely et al., 2011), and technology can be leveraged to get closer to customer and aid in developing customized or tailored customer solutions.

Management researchers have found that signaling effectiveness is determined in part by receiver interpretation (Connely et al., 2011). Receiver interpretation refers to the process of translating signals into perceived meaning. Different receivers may not have the same concerns and thus may interpret the same signal differently (Highhouse et al., 2007; Connelly et al., 2011). Receivers may apply weights to signals following preconceived notions about the importance (Branzei et al., 2004; Ehrhart & Zieger, 2005; Connelly et al., 2011).

In the returns process, customers may attribute more weight to the transparent loyalty program, which can provide customized messages based on individual customer data. A transparent loyalty program differs from a transparent return policy. Achieving a transparent loyalty program during the returns process requires greater information technology resource commitments and investment on the part of the retailers as it requires them to have the capability to track information across channels and collect feedback from customers. Consumers correlate signaling strength with signaling clarity and quality, and will perceive signaling strength to be greater when retailers engage in both a transparent loyalty program and transparent return policy. Such signaling strength will further affect consumers' interpretations of and reactions to the signal. Customers pay more attention to the signal, which in turn leads to more efficient signaling and a positive image of retailers committed to ensuring a better customer experience. Through the clear

disclosure of return policy and a customer loyalty program, customers can better understand a retailer's posture and activities and assess the signal fit between transparency and the reverse logistics service experience. Therefore, customers are in a better position to infer the retailer's confidence in terms of reverse logistics service quality. When the perception of transparent loyalty programs capability is high, customers may perceive that retailers are more likely to commit to them and cultivate a stable, long-term relationship. We argue that greater perception of transparent loyalty programs enhances the relationship between transparent return policy and perceived procedural reverse logistics justice during the return process.

Hypothesis 7:

The effect of the transparent return policy on the perception of reverse logistics procedural capability is stronger when the perception of the transparent loyalty program is high than is low.

4.8 Moderating effect of Frontline interactional justice

We also posit that the positive effect of reverse logistics procedural capability on customer repurchase behavior varies as a function of frontline employee interactional capability. Namely, reverse logistics procedural capability's influence on customer repurchase behavior is stronger when frontline employee interactional capability is low compared to high. Investigating the potential interaction between reverse logistics procedural capability and frontline employees' interactional capability is important for understanding conditions under which procedural justice perception is especially meaningful for encouraging more customer repurchase behavior.

When retailer's frontline employees have a lower level of interactional capability, reverse logistics procedural capability becomes even more important to impact customer repurchase behavior. In contrast, when customers have a higher perception of frontline employee interactional

capability, the perception of reverse logistics procedural capability is less important to customers' repurchase behavior because they can rely on their perception of interactional justice to make a decision.

When frontline employees are perceived to be competent to serving customers, it demonstrates genuine concern for the customer's welfare. The retailer's entire service quality may be increased in the customer's eyes (Daugherty et al., 2005). In service recovery studies, actions deployed to impact another party's perceived justice of the resolution (procedural, interactional, and distributive justice) are suggested as tools to correct a negative event's damage (Wang et al., 2014; Cheng et al., 2019) and to improve customer satisfaction (Carr, 2007).

Capable employees are more likely to identify customer needs, clarify customer confusions in terms of policies and procedures, and then increase customer satisfaction (Poujol et al., 2013). For example, if a customer needs an exchange, the frontline employee can immediately recommend an alternative product and provide customers with exact availability information of a product. Following this reasoning, we postulate the following hypothesis:

Hypothesis 8:

Frontline employee capability negatively moderates the effect of reverse logistics procedural capability on repurchase behavior.

Figure 3
In-store return conceptual model

Conceptual model

Transparency Capability

Justice Capability

**Loyalty Program
Capability**

**Frontline EE
Interactivity
Capability**

**Returns Policy
Capability**

**Reverse Logistics
Procedural
Capability**

Repurchase Behavior

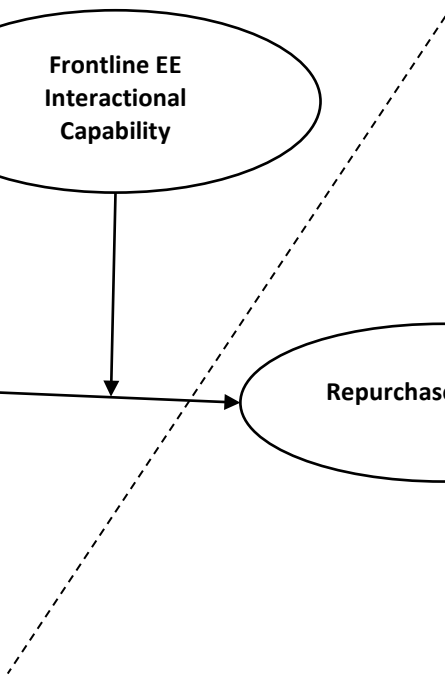
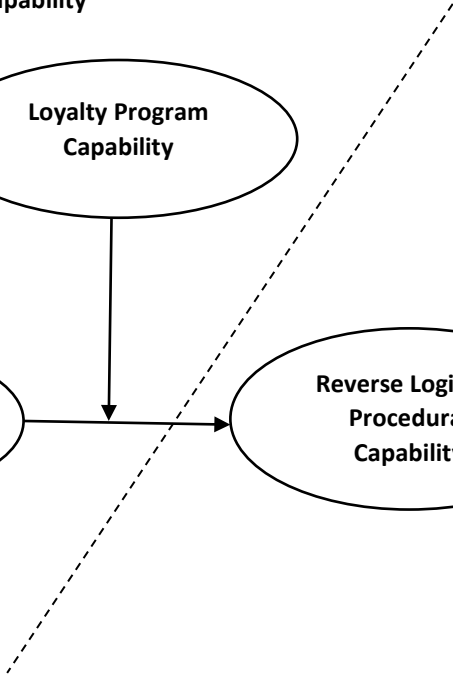
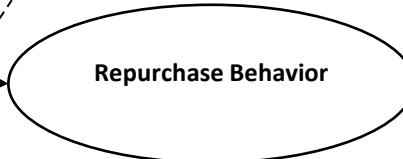


Table 4
Summary of Hypotheses

Effect	No.	Hypothesis
Main effects	H_1	Transparent returns policy will be positively associated with reverse logistics procedural justice in the return process.
	H_2	Transparent loyalty program will be positively associated with reverse logistics procedural justice in the return process.
	H_3	Customer perception of reverse logistics procedural justice will be positively associated with customer repurchase behavior.
	H_4	Customers' perception of frontline employee capability is positively associated with their repurchase behavior.
	H_5	Transparent returns policy will be positively associated with customer repurchase behavior.
	H_6	Transparent loyalty program will be positively associated with customer repurchase behavior.
Two-way interaction effects	H_7	The transparent loyalty program will positively moderate the effect of the transparent return policy reverse logistics service procedure justice, such that the effect of the transparent return policy on reverse logistics service quality will be more substantial for customers with a high perception of the transparency of the loyalty program.
	H_8	Frontline employee capability negatively moderates the effect of reverse logistics procedural capability on repurchase behavior.

5. Methodology

5.1 Experimental Design

We adopted a scenario-based experiment to simulate a buy online and return in-store scenario to investigate our proposed relationships. Scenario-based experiments have been used in supply chain research (e.g., Blessley et al., 2018; Mir et al., 2017; Ta et al., 2018; Duan & Aloysius, 2019) to isolate effects that are difficult to observe in noisy field experiments. The experiment features eight conditions corresponding to eight scenarios (see Appendix 1), describing a physical store's returns situation.

We generated a written description of a hypothetical returns scenario at the physical store. We began with the development of a common module (a statement that was held constant across all groups) in all scenarios and an experimental module (including statements that varied across groups) (Rungtusanatham et al., 2011). Participants were told that they were about to return one misfit product they bought online on a weekend to retailers' physical stores. We manipulated three between-subjects factors as part of this experiment, as developed from our qualitative analysis: transparent return policy, transparent loyalty program, and frontline employee capability. After drafting several iterations of the vignette, we obtained comments from five well-known scholars in the supply chain area. They reviewed the experimental conditions and provided invaluable feedback on the instructions and clarity of the writing. After making the appropriate adjustments to our instrument, we conducted two pilot tests before our main data collection effort.

The experiment design for our study was a 2 (low return policy transparency vs. high return policy transparency) \times 2 (low loyalty program transparency vs. high loyalty program transparency) \times 2 (low frontline employee capability vs. high frontline employee capability) between subjects. The dependent variables measured include three questions on buying from the same retailer's

physical store and three questions on buying from the same retailer's website shortly and in the near future.

5.2 Experimental procedure and vignettes

We adopted a multi-segment experimental approach similar to that of Bendoly et al. (2010). At the beginning of the survey, all participants were provided a detailed set of instructions (see Appendix 1) to ensure the experimental procedure's consistency. Participants were informed that they were involved in a study about buying online and return in-store scenarios and were instructed to answer honestly in one sitting. Participants were assured that their responses were anonymous and that we were only interested in their thoughts and responses. In all scenarios, participants assumed the role of making returns at the physical store and were presented with different treatment conditions.

The procedural flow consisted of three segments. Segment one involved a pre-qualified survey modeled after Barisione and Iyengar (2016) and in line with other studies that investigate ethnicity issues (Bacharach et al., 2005). The pre-qualify survey included a series of demographic and background questions, including ethnicity, and was carefully blended to minimize any priming effects (Ta et al., 2018). During segment two, each subject was provided with a scenario and specifically assigned treatment exposure. We randomly assigned participants to each of the eight scenarios. Segment three used follow-up questions to measure research constructs, manipulation effectiveness, participant attentiveness, social desirability bias, and other participant characteristics used as control variables. We randomized all the scenarios and answered options in an effort to minimize any "ordering" effect (Abbey et al., 2017).

To improve data quality and validity, we employed several approaches to avoid potential concerns regarding using Prime Panels for data collection. Our between-subject design and subtle

manipulation were able to prevent the participants from guessing the purchase of the research, reducing the unwanted demand effects (Lonati et al., 2018). Following Schoenherr et al.'s (2015) recommendation, we included attention check questions and retained a quality filter based on participants' prior histories on the M-Turk platform. Lastly, we prevented the same individual from entering the same study multiple times by accepting only one participant per Internet Protocol (IP) address (Zhu et al., 2018).

Since apparel is one of the highest returns product categories in the omnichannel context, we select apparel as the experimental product. To eliminate any potential brand effects, we removed the brand name and used a general term: "your favorite brand."

5.3 Subjects

Research participants were recruited from two different sources: The first sample was recruited from two large public Southern universities in the United States to exchange course bonus credits. We pretested the manipulation with 603 undergraduate business students. Student samples have been shown to be appropriate for some supply chain research contexts (Thomas, 2011) and are particularly relevant when studying consumers (Kardes, 1996).

The second sample was recruited on Prime Panels in October of 2020. Like Amazon Mechanical Turk (Mturk), Prime Panels is a participant recruit platform developed by CloudResearch in 2017. Prime Panels participants were more representative of the country across many variables than participants from Mturk. The research revealed that the data quality collected from Prime Panels was comparable to that from Mturk participants across multiple measures (Chandler et al., 2019). This approach was in line with recent research that has substantiated Mturk samples as of equal or better quality than other professional panels and student samples for consumer-oriented experiments (Ta et al., 2018; Goodman & Paolacci, 2017; Houser & Schwarz,

2016; Kees et al., 2017; Steelman et al., 2014). Prime Panels allows scholars to access more diverse populations with regard to culture, occupation, education, and age. In fact, supply chain research is increasingly using crowdsourcing tools like Mturk to address behavioral supply chain management issues (Cantor et al., 2014; Peinkofer et al., 2016; Tokar et al., 2020). We only recruited participants from the U.S. to minimize extraneous factors that might stem from country-to-country cultural differences (Ta et al., 2018). Table 6 presents details of sample characteristics.

Table 5

Sample characteristics

	Turk Prime
Gender	
Female	341 (66.6%)
Age	
18-34	227 (44.3%)
35-54	231 (45.2%)
Over 55	54 (10.5%)
Education	
High school (or equivalent)	38 (7.4%)
2-year college	155 (30.2%)
4-year college	234 (45.7%)
Postgraduate degree	76 (14.9%)
Professional degree (MD, JD, etc.)	9 (1.8%)
Sample size	512

5.4 Experimental validation

The experimental validation used in this research consist of three phases: two pretests and one main study. Prior to hypothesis testing, we conducted two pretests to develop and refine the experimental stimuli used in the main study to ensure appropriate variable information (Knemeyer & Naylor, 2011) and isolate the causal relationships between independent and dependent variables.

5.4.1 Realism check

As recommended by Rungtusanatham, Wallin, and Eckerd (2011), we tested the extent to which participants perceived our scenarios as realistic. "I am likely to have a similar return experience in my daily life" was measured on a 7 Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). Participants were also asked for open-ended feedback regarding the questions and the survey. The feedback was used to refine the wording of the vignette and survey questions for further experiments. We grouped the open-ended answers into several emerging categories. It echoes with each treatment in the vignette experiment. For instance, participants take a scenario with a low-level transparent return policy expressing the need for high-level returns transparency in the returns process.

5.4.2 Attention check

Following the guidelines of prior literature (Schoenherr et al., 2015; Peer et al., 2014; Goodman et al., 2013), we also include a single-item direct attention check question to assess and eliminate careless responses and increase data quality (Meade & Craig, 2012). We also evaluated response consistency, pattern, and effort as functions of response timing (Abbey & Meloy, 2017). As a result, prior to the data analysis, a portion of samples was removed due to reasons such as speeding, straight-lining, and missing information.

5.4.3 Manipulation check

To evaluate the efficacy of the transparent returns policy capability, transparent loyalty program, and frontline employee interactional capability, we included three manipulation check questions in the study. Using a 7-point Likert Scale (1-Strongly disagree, 7-Strongly agree), we asked to evaluate to what extent they agree that (1) “the returns policy is well communicated to me in the returns process”; (2) “the loyalty program information is clearly communicated to me in the returns process”; and (3) “the representative at the store makes me feel comfortable in the returns process”. We used the ANOVA test to provide evidence for manipulation checks.

5.4.4 Social desirability bias

Social desirability bias can often be an issue in research that deals with sensitive topics, such as ethnicity (Bagozzi & Yi, 1991). To minimize social desirability bias effects, we employed a number of precautionary approaches. At the beginning of data collection, participants were ensured that their responses were anonymous and we only valued their answers (Fisher, 1993). In the second data collection (Mturk), we used an additional approach by including five items from the Crowne and Marlowe (1960) social desirability scale in the post-experience survey. This approach is in line with Carter (2000) and Hartmann and Moeller (2014), and allows for testing of the direct path from the social desirability measure to the dependent variable. Overall, we found social desirability did not affect the dependent variables, suggesting participants answered the questions related to the perceived outcome without distorting their response to appear "non-discriminatory."

5.5 Measures

Our dependent variable was adapted from the literature to fit the study context, with the unit of analysis at the subject level, and appendix B provides an overview of the measures used. *Repurchase behavior* measures were adapted from Esper et al. (2003) and Pizzi and Scarpi (2013). *Repurchase behavior* was measured by six-item, capturing the extent to which that consumer will buy from the retailer again in the immediate and long-term future.

We assessed *customers' perceived reverse logistics procedural justice* of the retailers' returns handling at the physical store by asking to what extent respondents agreed with each of the justice items as they evaluated the process. Procedural justice was measured with five items adapted from Autry et al. (2001).

We assessed *customers' perceived frontline employee interactional justice* by asking to what extent respondents agreed with each of the justice items as they evaluate the returns process. Interaction justice was measured with six items based on Murali (2016) and Ellinger et al. (2008).

We assessed customers' perceived *transparency of return policy* in the returns process by gauging each respondent's agreement with each of the items. The transparent returns policy was measured with six items adapted from Bonifield et al. (2010).

We assessed customers' *perception of loyalty programs* by asking to what extent respondents agreed with the loyalty program transparency items in the returns process. We used six items adapted from Vesal & Zabkar (2009) and So et al. (2015).

Several control variables were also included, in line with previous literature suggesting customer behavior and similarity perceptions may vary by individual characteristics (Bregman et al., 2015; Ta et al., 2018). The control variables include gender, age, income, education, ethnicity,

previous experience with crowdsourcing platforms, and shopping frequency in the past year. "Shopping frequency" captured a person's shopping times in the past year and was measured by one item adapted from (Tokar et al., 2020).

To assess whether the experimental manipulation was held, we included a one-item measure for the transparent loyalty program and transparent return policy, respectively. A five-item measure was used to assess whether participants were aware of their respective experimental conditions concerning the transparent return policy and transparent loyalty program.

5.6 Pretests

5.6.1 Data collection

Six hundred and three students were recruited from six different business courses at two large public Southern U.S. universities in exchange for course bonus credit to participate in the pretest. All participants were randomly assigned to one of eight experimental conditions (Bachrach & Bendoly, 2011; Knemeyer & Naylor, 2011). We removed 235 responses finished in less than 5 minutes, regarded as speeding through the survey. Furthermore, 25 respondents who have indicated that they have taken the survey before were also eliminated. We thus had a usable sample of 343. Even though the loss rate is fairly high, it is within the range of attention check results reported in other experimental operations studies (Abbey & Meloy, 2017). The average time to complete the study was 7 min.

We asked each participant to evaluate the perceived treatment of one of all eight scenarios on a 7-Likert scale (1=strongly disagree; 7=strongly agree) and conducted an independent t-test. We included three manipulation check questions in the study. Using a 7-point Likert scale (1=Strongly disagree, 7=Strongly agree), we asked participants to evaluate to what extent they agree that "The return policy is well communicated to me in the return process" and "The loyalty

program information is clearly communicated to me in the return process.” The results of two one-way ANOVA tests provided support for all manipulations: for the first question, transparent return policy, high level were significantly larger in scenarios than in the low-level scenario; for the second question, transparent loyalty program, high-level cases were statistically significantly different with the low-level scenario. These two measurements helped us assess whether the experimental manipulation was held, following Perdue and Summer (1986) and Bachrach and Bendoly (2011). To evaluate whether the designed return scenario was perceived as realistic, we asked participants to indicate whether they could imagine the returns experience happening to them. The average realism check measure score was 5.6 on a 7-point Likert scale, with a standard deviation of 1.05. The results demonstrated that our participants could imagine the hypothetical returns experience happening to them. They were prompted to answer an open-ended question asking what made the shopping situation realistic.

One sample t-test shows that means were significantly different from low level and high level, indicating a successful treatment manipulation. There is a significant difference in the perceived transparent return policy. However, the obtained result revealed that manipulation for the transparent loyalty program was not working as expected. One of the measurement items of the transparent loyalty program was grouped into frontline employee capability. After reviewing the data and discussing possible improvements with three scholars, we detailed the treatment conditions. We then conducted a second pilot test by collecting another 120 responses on Prime Panels. The responses indicated that the updated statement had the intended effect.

5.6.2 Measurement reliability and validity

AMOS 25.0 for SPSS was used to assess the dependent measure's convergent and discriminant validity through confirmatory factor analysis (CFA). We conducted a principal

components analysis using a Promax rotation (Fabrigar et al., 1999) and found evidence of discriminant validity. We assessed the reliability of the dependent variable by means of Cronbach's alpha and composite reliability statistics. The values of Cronbach's alpha exceed conventional thresholds of 0.7 (Nunnally, 1978). Our five-factor model, including repurchase behavior, reverse procedural justice, transparent return policy, transparent loyalty program, and frontline employee capability, was established. The fit statistics were CFI=0.943, RMSEA=0.075, SRMR=0.046. These fit indices provided support for our model (Hair Jr. et al., 2016).

Convergent validity was established through the average variance extracted (AVE). The AVE for each factor exceeds the recommended threshold of 0.5 (Fornell & Larcker, 1981), and all three alpha values exceed 0.8 (Nunnally & Bernstein, 1994). We established the factor's discriminant validity by comparing each factor pair's phi-square correlation with their respective AVE. For each pair of factors, the AVE exceeded the phi-square (Fornell & Larcker, 1981). Table 2 provides a summary of the standardized loading and Cronbach alpha. To assess discriminant validity, correlations between variables were compared to the square root of average variants extracted (AVE). In all cases, the square root of the AVEs was larger than the correlations, supporting discriminant validity (See Table 3). To assess convergent validity, standardized factor loadings for each item were observed. The item factor loading was all above the 0.5 threshold and significant, suggesting convergent validity. The AVEs for latent variables were above 0.5, suggesting adequate construct reliability. Table 3 has all the constructs, including the square root of AVE diagonal in bold and all the correlations off-diagonal. All of our five construct measures were obtained by averaging the scores on each individual scale item to obtain a single measure for each construct.

5.7 Main study

5.7.1 Data collection

In the main study, the survey questions were practically identical to those employed in study one, with a few minor modifications to the wording to fit the context. Subjects for the experiment were recruited through Prime Panels and were paid \$1.8 after completing an online survey built using Qualtrics. We created a human intelligence task in TurkPrime to collect data from willing participants with online purchasing experience (Sheehan & Pittman, 2016). Because we seek to better understand customers' repurchase behavior, crowdsourcing the data through Prime Panels was a practical and efficient means to conduct our vignette-based field experiment (Goodman & Paolacci, 2017).

We limited our Prime Panels' participant pool to customers located within the United States who were 18 years of age or older and had made at least one online purchase and one return in the last year. We offered potential participants \$1.8 for completing the experiment. We asked every participant to formally "Accept" before accessing the study (Goodman & Paolacci, 2017), then we asked the participants to role-play a customer seeking to return an item of clothing purchased online from their favorite brand. We do not include specific brands as a factor in our experiment or analysis, as we are not interested in the brand effect, so the favorite brand is employed. Prior to our participants' random assignment to a treatment condition, we provided them with background details about the situation that "you decide to return the product at the physical store to skip the process of packaging and taping."

We test participants' understandings of the background information by asking one attention-check question (Abbey & Meloy, 2017). Qualtrics survey software was used to randomly assign participants to one of the eight experimental treatments. Following the treatment, we asked

three manipulation check questions to ensure that the participants understood the scenario. We then moved on to ask a series of questions about the participants' perception of return policy transparency, loyalty program transparency, and frontline employee capability in their returns experience at the physical store.

Initial responses numbered 620, but 94 were removed from the data set for one of the multiple reasons, including repeated answers or incorrect responses to attention-check questions. In total, we were left with responses from 512 subjects. Demographics are shown in Table 1, while Table 2 details the number of subjects in each experiment's condition. Participants who did not pass these manipulation checks were removed from the sample, which resulted in a final sample size of 512 used to conduct the final analysis of the main study.

Our sample consisted of 512 adults from the United States with a mean age of 35.3, ranging from 19 to 79 years, in which 66.6% were female. Overall, 87.7% of the participants reported having at least some college education. The median combined household income was between \$40,000 and \$49,999. All data were collected via the Prime Panel national online consumer panel (Knemeyer & Naylor, 2011; Goodman et al., 2013).

Table 6

Details the number of subjects in each experiment condition

Scenario Version	Transparent Return Policy (Q4M)	Transparent Loyalty Program (Q5M)	Frontline Employee Capability (Q7M)	Sample size
V1	HIGH	HIGH	HIGH	65
V2	HIGH	HIGH	LOW	72
V3	HIGH	LOW	HIGH	58
V4	HIGH	LOW	LOW	72
V5	LOW	HIGH	HIGH	65
V6	LOW	HIGH	LOW	71
V7	LOW	LOW	HIGH	47
V8	LOW	LOW	LOW	62
Total				512

5.7.2 Measurement reliability and validity

AMOS 25.0 for SPSS was used to assess the convergent and discriminant validity of the variable measure through confirmatory factor analysis (CFA). We also conducted a principal components analysis using a Promax rotation (Fabrigar et al., 1999) and found evidence of discriminant validity. Our five-factor model, including repurchase behavior, reverse procedural justice, transparent return policy, transparent loyalty program, frontline employee capability, was established. The fit statistics are CFI=0.943, RMSEA=0.075, SRMR=0.046. These fit indices provide support for our model (Hair Jr. et al., 2016).

Table 7
Correlation and descriptive statistics

Latent variable	No. of	Mean	SD	1	2	3	4	5
1 Transparent Return Policy	6	3.6787	2.103	0.9				
2 Transparent Loyalty Program	6	3.8887	1.729	0.412	0.854			
3 Frontline Employee Interaction	6	3.9596	1.831	0.376	0.288	0.913		
4 Repurchase behavior	6	4.2435	1.665	0.598	0.453	0.563	0.911	
5 Reverse Procedural Justice	5	4.3734	1.654	0.633	0.452	0.632	0.783	0.879

Notes: 1. S.D. = standard deviation, 2. Diagonal elements display the square root of AVE. All correlations are significant at $p < 0.01$

We assessed the dependent and independent variables' reliability by means of Cronbach's alpha and composite reliability statistics. The values of Cronbach's alpha exceeded conventional thresholds (Burton et al., 1994). Convergent validity was established through the average variance extracted (AVE). The AVE for each factor exceeded the recommended threshold of 0.5 (Fornell & Larcker, 1981) and all three alpha values exceeded 0.8 (Nunally & Bernstein, 1994). We established the factor's discriminant validity by comparing each factor pair's phi-square correlation with their respective AVE. For each pair of factors, in all cases, the AVE exceeded phi-square (Fornell & Larcker, 1981). (See Table 3). we assess convergent validity by checking standardized factor loadings for each item. The item factor loading is all above the 0.5 threshold and significant at $p < 0.001$, suggesting convergent validity. The AVEs for latent variables are above 0.5, suggesting adequate construct reliability. Table 3 has all the constructs: the square root of AVE diagonal in bold and all the correlations off-diagonal. All of our construct measures were obtained by averaging the scores on each individual scale item to obtain a single measure for each construct.

Table 8
Confirmatory Factor Analysis Loading & Reliability Estimate

Item	Standardized loading	Cronbach's α	CR
Transparent RP1	0.89	0.962	0.962
Transparent RP1	0.90		
Transparent RP1	0.87		
Transparent RP1	0.93		
Transparent RP1	0.91		
Transparent RP1	0.90		
Transparent LP1	0.92	0.941	0.942
Transparent LP2	0.92		
Transparent LP3	0.91		
Transparent LP4	0.78		
Transparent LP5	0.81		
Transparent LP6	0.77		
Frontline Employee Interaction1	0.88	0.968	0.968
Frontline Employee Interaction2	0.96		
Frontline Employee Interaction3	0.96		
Frontline Employee Interaction4	0.91		
Frontline Employee Interaction5	0.88		
Frontline Employee Interaction6	0.89		
Reverse Procedural Justice1	0.92	0.944	0.944
Reverse Procedural Justice2	0.83		
Reverse Procedural Justice3	0.90		
Reverse Procedural Justice4	0.91		
Reverse Procedural Justice5	0.83		
Repurchase behavior1	0.93	0.967	0.968
Repurchase behavior2	0.91		
Repurchase behavior3	0.91		
Repurchase behavior4	0.93		
Repurchase behavior5	0.92		
Repurchase behavior6	0.88		

Table 9*Hierarchical regression result of PROCESS models*

	Model 1	Model 2	Model 3	Model 4	
Predictors	Repurchase Behavior	Reverse Procedural	Repurchase Behavior	Reverse Procedural Capability	Repurchase Behavior
<i>Control Variable</i>					
Gender	-0.011	0.2152	-0.023	0.2226*	-0.0227
Income	0.040	-0.0025	0.023	-0.0023	0.0238
Shop Frequency	0.035	0.0860	0.069	0.0688	0.0673
Age	0.006	0.0068	0.004	0.0071	0.0039
Social desirability	0.238***	0.1288**	0.026	0.1400**	0.0261
Education	0.035	0.1583	-0.129	0.1416	-0.1335
<i>Main effects</i>					
Return Policy Capability		0.2715***	0.145***	0.3944***	0.1470***
Loyalty program		0.1065	0.112***	0.2191***	0.1124***
Employee Interactional			0.131***	N/A	0.1685**
Reverse Procedural			0.499***	N/A	0.5259***
<i>Interaction effects</i>					
Return Policy Capability X Loyalty program		0.0305**			
Employee Interactional Capability X Reverse					-0.0082
Constant	2.637	1.1425	0.020	0.7411	-0.0084

Note: Table reports standardized coefficients. * $p < 0.1$, ** $p < 0.05$; *** $p < 0.01$

6. Results

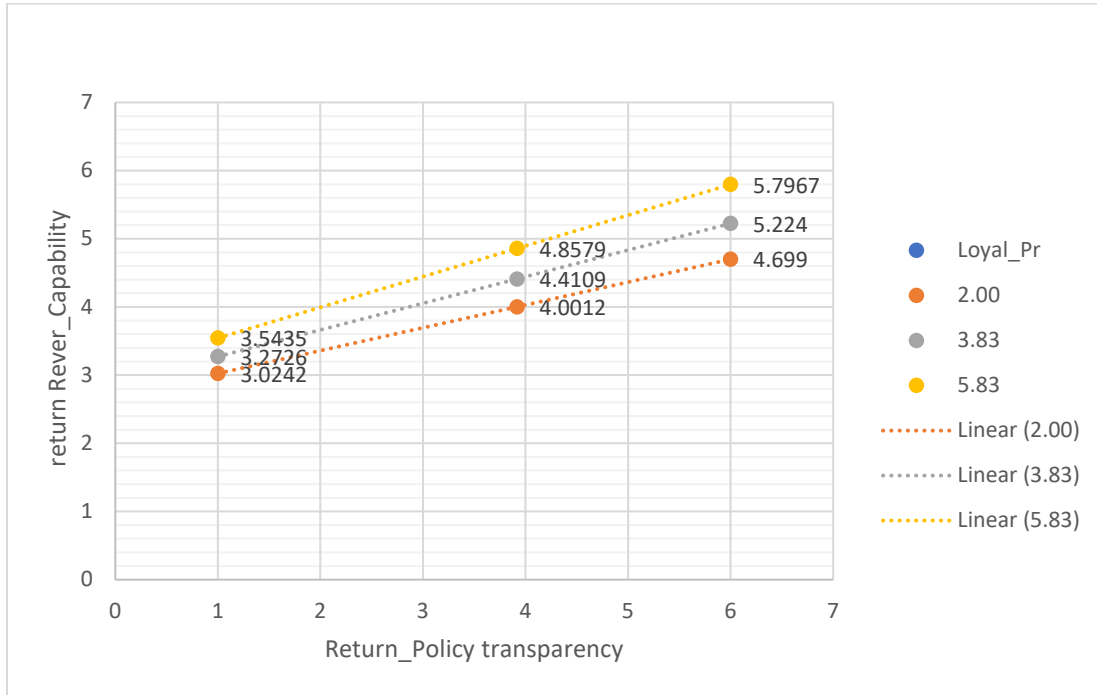
Hypothesis testing

In order to test the proposed model, the SPSS PROCESS 22 was used to examine the mediation between transparent return policy and repurchase behavior through reverse procedural justice. Based on ordinary least square path analysis, PROCESS allows researchers to test for mediation, moderation, and conditional process analysis (Hayes, 2013). The bootstrapping approach with repeated sampling arrives at narrower confidence intervals for estimates and, therefore, greater asymptotic accuracy (Duan & Aloysius, 2019). In assessing the mediated relationship between variables, it is essential to examine both direct and indirect effects. The direct effects exist between two specific variables, while the indirect effects are the links between two variables that are facilitated by other variables (Morgan et al., 2018). In a fully mediated relationship, the direct effect between structure and performance variables is not expected to be statistically significant, but the indirect effects mediated by the reverse logistics capability should be significant. The mediation assessment results are summarized in Table 4. The first part of the table's output provides the information needed to address the direct effect, in which the consequence is the mediator reverse procedural justice (RLC). The remainder of Table 4 provides the necessary information to handle the indirect effects.

Table 10
Summary of Outcomes for Hypotheses

Effect	No.	Hypothesis	
Main effects	H_1	A transparent returns policy will be positively associated with customers' perception of reverse logistics procedural capability in the return process.	Supported
	H_2	A transparent loyalty program will be positively associated with customers' perception of reverse logistics procedural capability in the return process.	Supported
	H_3	Customers' perception of reverse logistics procedural capability will be positively associated with customers' repurchase behavior.	Supported
	H_4	Customers' perception of frontline employee interactional capability is positively associated with customers' repurchase behavior.	Supported
	H_5	A transparent returns policy will be positively associated with customers' repurchase behavior.	Supported
	H_6	A transparent loyalty program will be positively associated with customers' repurchase behavior.	Supported
Two-way interaction effects	H_7	The transparent loyalty program will positively moderate the transparent return policy's effect on customers' reverse logistics service procedural justice. Such that the effect of the transparent return policy on customers' perception of reverse logistics procedural justice will be more substantial for customers with a high perception of the transparency of the loyalty program.	Supported
	H_8	Frontline employee capability negatively moderates the effect of reverse logistics procedural capability on repurchase behavior.	Not supported

Figure 4
The moderating effect of the transparent loyalty program



We use PROCESS macro (model 22, n=10,000) to test the predicted interaction effect between the transparent loyalty program and transparent returns policy (H7). H7 hypothesized that transparent returns policy capability and transparent loyalty programs interact to produce reverse logistics service capability perception. The data support this expectation. Interestingly, the result indicates that the relationship between transparent returns policy and reverse logistics service procedural capability is stronger when the transparent loyalty program capability is high as opposed to low. This finding suggests that customers increase their reverse logistics service capability perception with high transparent loyalty program capability if they are given the same level of the transparent returns policy. Thus, this result implies that transparency is an essential factor that helps retailers enhance their reverse logistics procedural service capability perception. However, we could not find evidence that frontline employee interactional capability attenuates

the effect of reverse logistics procedural service on repurchase behaviors. Therefore, H7 is supported, and H8 is not supported. Table 11 presents a summary of the results for all studies.

7. Discussion and implications

This study contributes to understanding consumer return behavior in an omnichannel retail setting by examining the association between customer in-store returns experiences and subsequent shopping behavior. Our research design allows us to capture customer responses for in-store retail service quality factors in regard to their fairness perceptions and repurchase behavior. This study extends our knowledge about retail supply chain management and logistics in exploring how supply chain management and logistics enhance the in-store experience and support personalization in omnichannel retailing. We now interpret our findings and provide both theoretical implications and practical managerial insights.

7.1 Theoretical implications

This study's findings make an important contribution to the omnichannel retailing literature by uncovering the effects of the in-store return experience on customer repurchase behavior based on signaling theory and justice theory. One needs to focus on the consequences of merchandise returns and whether business value can be generated from customer returns. There has been limited scholarly examination of the role of returns experience itself on factors that could drive business.

Even though customers have been recognized as critical, active participants in supply chain execution (Ta et al., 2015), their reactions, perceptions, and supply chain performance assessments were not traditionally considered (Esper & Peinkofer, 2017). The existing literature primarily investigates the measures of efficiency, effectiveness, and differentiation from all stakeholder perspectives (Esper & Peinkofer, 2017; Sanders et al., 2013). This study contributes to supply

chain management literature by emphasizing the measurement of reverse logistics performance from the end-consumers perspective. By understanding customers' perceptions of retailers' omnichannel capabilities, it can allow the retailers and their supply chain to understand customers' needs better and make corresponding improvements to increase customer demand. We seek to better understand how available information, the in-store returns experience, and consistency in the service provider through returns process transparency within the omnichannel retail environment influence customers' perceived behavioral controls and risks, and ultimately their shopping behaviors.

7.1.1 Transparency and signaling theory

Information disclosure has been widely discussed in supply chain management literature. Examples include product information (Dadzie et al., 2005), carrier information (Esper et al., 2003; Tokar et al., 2019), and inventory availability (Peinkofer et al., 2016). Information disclosure in forward logistics service has been regarded as important as a means of connecting to the end-customer. However, information disclosure in reverse logistics, specifically the disclosure of details regarding handling returns, has long been ignored. Our study findings contribute to the framework of transparency by examining that disclosure of returns policy and loyalty program during the returns process impacts customers' perception of reverse logistics service quality and repurchase behavior.

The findings that perceived transparency of the returns process having a significant effect on customer repurchase behavior are consistent with signaling theory and confirm that customers who can observe how and why rules are applied in the returns process take this as a reliable signal of service quality via justice evaluation. Our study suggests that research to investigate how improved transparency can be achieved would be valuable for those managing and searching

omnichannel retailing. Future research could also help distinguish between different kinds of perceived transparency, as there may be additional signals of service quality. Theorizing the various antecedents of multiple kinds of perceived transparency and their respective effects might provide the basis for a more generalizable theory of process transparency that could apply beyond the returns channel process.

A broader implication of our findings is that more extensive applications of signaling theory may be useful in reverse logistics. Retailers may benefit from our study by conducting studies that establish the degree to which different aspects of system design and architecture are more likely to signal to users that the data they contain are high quality. Our study examines the transparent return policy, the transparent loyalty program of an in-store experience and illustrates the impact of transparency on customers' reverse logistics service quality perception and repurchase behaviors responses. Our results suggest that not all characteristics are equally persuasive in influencing reverse service quality perceptions, suggesting the possibility of a hierarchy of signals, from relatively strong to weak. Future research that sought to develop models that could integrate findings from the broader information-related perspective of the field could be particularly valuable. Understanding what aspects of a systems' interface, contents, and functionality are typically seen as more reliable signals of quality across a range of technologies offers an exciting new direction for information system adoption research.

7.1.2 Justice theory

Although widely accepted as an explanation for behavior, justice theory has seen limited use in retailer-customer relationship management research (Tokar et al., 2020). Our study adds weight to the body of evidence that suggests justice theory can be profitably employed to explain customer behavior issues. Our findings indicate that as retailers treat their customers fairly in terms

of returns processes and interactions, consumers reciprocate by engaging in behaviors aimed at strengthening the relationship. This reinforces the view that retailers need to make themselves attractive to consumers by offering value to consumers not only in terms of products, but also in terms of in-store competency and reverse logistics service quality. Retailers should understand the source of such value to customers. This study confirms that one such source of value is how fairly customers feel they are treated. The result from the quasi-experiment design lends strong support to the notion that consumers may rely heavily on returns procedures when assessing the overall fairness of returns events than the actual outcomes. The present study also demonstrates the importance of having competent employees at the customer interface. Results indicate that procedural fairness has a stronger impact on satisfaction than interactional fairness, suggesting that the way the returns are handled is significant for retailer-customer relationships management. The results of this study enhance our theoretical understanding of customer relationship management.

A core contribution of this study is to expand our understanding of returns management by theorizing and confirming that what customers learn about the returns process matters: consistent with signaling theory, these perceptions are strong indicators of retailer service quality, and consistent with justice theory, they have significant effects on repurchase behaviors. However, there is clearly room for improvement. While perceived transparency of return policy and loyalty programs are important, they are unlikely to be the only characteristic that influences customer behaviors. Future research that expands upon this set of antecedents is likely to provide additional insight into how the returns process affects customer repurchase behaviors.

7.1.3 Supply chain

This research also contributes to the understanding of cross-channel customer management. Myers et al. (2004) show that influencing customers' channel choices can lead to reduced costs

associated with serving the customer. While it is challenging to fully understand the interdependencies between the setup of omnichannel structure, channel-related customer management efforts, their mutual benefits, as well as management from omnichannel retailer companies to effectively guide customers through channels, this study contributes to the understanding of the stores' logistics roles in the reverse logistics processes. Returns of online orders in stores rather than via mail have various advantages. It is possible to directly add store inventory depth while meanwhile shortening the cycle time during which the product is not in store (Hubner et al., 2015). This also reduces handling costs (Agatz et al., 2008). Furthermore, in-store product availability checks and additional recommendations from the employee can serve as factors in customers' channel choices in omnichannel retailing.

7.2 Managerial implications

This study explores key elements of supply chain strategy which are relevant and important to omnichannel retailers. Retailers who are considering expanding their omnichannel capability and rethinking their physical store roles in the complex omnichannel environment can use this study's findings to evaluate their strategy and identify the level of realignment effort needed. Our exploration of customer responses to retailer's offerings for in-store returns management will guide retailers in developing requisite operational capabilities.

7.2.1 Frontline employee capability

With respect to insight into the frontline employees' capabilities, the result demonstrates a high frontline employee capability increase customers' repurchase behaviors. Of our four direct paths influencing customers' repurchase behavior, frontline employee capability has the second-largest standardized path coefficient and significantly affects customers' repurchase behaviors. This result is critical for retailers, emphasizing the need to reinforce frontline employees' capability

to handle returns. The findings motivate the idea that a training program may be a tactic to improve customers' repurchase behavior through the in-store returns experience. An interesting question to consider is whether retailers are willing to train frontline employees in regards to handling returns. Retailers usually have a training program to increase sales, while not tailored for handling returns. They may conduct store-wide training of all representatives handling returns or focus on some representative specifically handling returns across the organization. The training program should aim to improve service employee friendliness and competency in returns handling.

Capable frontline employees have increased knowledge of customer needs and can respond appropriately to retain unhappy customers agitated by an unpleasant shopping experience. For some retailers with limited resources, store managers might try to achieve the requisite service by focusing on improving low-performance associates' service capabilities rather than store-wide improvements. On the other hand, it is ideal to have employees dedicated to servicing BORIS in order to get customers in and out of the store as quickly as possible. For instance, a customer arrives at the retail store to make a return, and upon approaching the returns desk, they are greeted by a store employee who is solely servicing BORIS. After sharing their order information, the employee is able to retrieve the customer's online order in a timely fashion. Most customers expect their BORIS experience to be quick. Employees preoccupied with checking out regular customers and providing customer service may not assist BORIS customers in a timely manner.

7.2.2 Transparency and information technology

The perceived risk to customers for returns mainly comes from their concerns about an unaccepted product return, refund issues, time delays in the return process, and loss of original receipts (Xu & Jackson, 2019). Those concerns during the return process might be addressed by reducing information asymmetry. It is critical for retailers to reduce the risk of customer returns

concerning the frequency and consequences. Retailers should efficiently communicate with the customer about the progress of returns, such as tracking information for product returns and the reasons for the processing times. Direct contact communication with customers has been regarded as an effective method to create the customer experience (Daugherty et al., 2019). In the age of impatience, the customer expects fast, cheap service, full traceability, and tracking capabilities to understand retailers' operations (Daugherty et al., 2019). The transparency will reduce the number of sources of customer uncertainty, enhancing their perception of controllability and reducing frustration and impatience while waiting for their returns handling.

Our findings indicate that a transparent returns policy increases customers' fairness perceptions of retailers' reverse logistics procedural capabilities (reverse logistics service quality), reduces consumers' perceived returns risks, and increases customers' trust in the retailer, resulting in more frequent shopping. The information technology deployment across omnichannel platforms shared between retailers and customers are essential to gain complete visibility of customer interactions (Daugherty et al., 2019). For a long time, retailers have relied on separate technology across different channels for omnichannel retailing, but it may not be able to keep pace with the changing needs of customers. The number and complexity of product returns are increasing with the development of omnichannel. Software that can enable connectivity across the entire organization and the customer may be required to achieve transparency in the return process. A seamless software enables retailers to keep the customer informed of price changes of products online and keep track of customer transactions. Meanwhile, seamless software makes it transparent to refund customers the amount they originally paid, even with applied discounts. Retailers should take the opportunity to invest in advanced analytics capabilities to ensure personal, timely, and

automated customer interactions and recommendations across channels. The obtained transparency reduces the return processing time and thus reduces customers' perceived hassles.

Given that many retailers use outdated software on computers at registers, another initiative would be to replace the outdated software with an up to date version to synchronize customer information across different channels and speed up the checkout process, while also making it available in the returns process. In such cases, the average store-wide checkout time is decreased. The transparency obtained through information technology increases customers' perceptions of retailers' reverse logistics service capabilities. We find that increased fairness perception of retailers' reverse logistics procedural capability via improving customer checkout time may increase customer repurchase behavior.

Suppose a retailer has limited resources to provide all the service information for a transparent return policy and transparent loyalty program. In that case, it may be more efficient in terms of generating repurchase behavior to provide a transparent return policy, such as putting the returns policy around the returns counter. Providing the customer with a simple and human-centered design of returns policy may ensure that customers are connected within multiple channels. The managing director should seize the opportunity to communicate clearly and strongly on the gravity of the visibility of returns policy needed for their company to emerge strongly post-pandemic.

7.2.3 Improving retail service quality dimensions

When a customer's returns experience is positive, it offers the retailer a chance to foster a relationship with the customer and reap positive behavioral outcomes. Retailers can use information from each customer's product returns behavior as a tool for realizing long-term

relationship growth and maximizing each customer's profitability. Retailers need to make continuous efforts to maintain relationships with their customers through delivering better quality service, even in service recovery situations. Based on this study's findings, it may be necessary to develop returns strategies that match customers' varying needs. This could be an effective way of turning customers making a return into customers showing loyal behavior.

Improving retail service quality with relatively less costly investment is possible. Checkout time lengths are one essential measurement of customer satisfaction (Ertekin et al., 2020) and also an area for retailers to improve service quality without high costs. Customers are less satisfied with the checkout time, and retailers should focus on initiatives to improve customer checkout at these stores. Retailers could increase the number of registers used for checkouts at stores with high foot traffic.

Retailers may provide a designated returns counter for customers to return their initial purchases. When the customer arrives at the store, they are directed to the correct spot to make a return. To minimize the total returns time for customers, retailers may provide designated areas for online returns along with clear visible signage directing customers to the returns area inside the store. Regardless of where the returns area is located, clear signage from the entrance should guide customers to the returns area. If there is clear visible signage directing customers to the returns counter, the retailers signal to consumers that retailers are committing resources to create a good customer experience. For example, a customer arrives at a retail store to make a return, and upon entering the front entrance, they see a bright red arrow labeled "online returns" pointing to the service desk on an adjacent wall. The primary purpose of BORIS is to maximize convenience for the customer. If the returns area is visible upon entering the store, they are able to see the BORIS desk immediately. Some retailers integrate their BORIS operations with their customer

service areas, while other retailers designate an independent area within the store for online returns. If retailers integrate customer service and online order pickup areas, the customer making returns has to join a line of other customers waiting to pick up their online orders or speak with customer service. The line can be long and inefficient if BORIS are serviced at the same place where customer service is located. Having a BORIS-specific desk allows for a faster, easier process for the customer.

8. Limitations and future research

As with any research, our study contains certain limitations. First, the respondents were given hypothetical scenarios about merchandise returns and were asked to respond to the questions. Although the scenario used was realistically adapted based on customer reviews, a discrepancy could exist between actual experiences and hypothetical scenarios. It is possible that customers would behave differently during an actual returns experience than in our experiment. However, given that one cannot easily access or control an omnichannel environment, and that gaining the ability to manipulate factors of interest is exceptionally difficult, our work represents a solid first attempt to answer questions at the retailer-customer interface in the omnichannel scenario.

Also, we narrowed the study's scope to apparel retail as the context of our investigation for three main reasons. First, apparel e-commerce has steadily grown over the last few decades, and apparel products are among the most highly returned in omnichannel retailing. Second, the apparel category represents a durable product, requiring little effort and cost to handle if returned. Third, apparel companies usually respond quickly to changes in consumer demand to maintain their competitive edge. Apparel retailers require precise knowledge regarding consumers' requirements at all times to avoid overstocked products as they may then quickly go out of fashion and, therefore, can no longer be sold (Koch et al., 2020).

Here, we did not specify the merchandise price. It might be reasonable to say when a customer buys an expensive product endures higher financial risks than a lower-priced product, it triggers a desire to receive more informational updates throughout the returns process to alleviate information asymmetry. This makes customers value the returns transparency more. Further research could test the moderating effect of different categories of merchandise.

Third, our study only targets respondents from the United States. The exploration of customers from other countries that have an omnichannel retail environment at different phases could be worthwhile.

A comparative study examining the different perceptions of the omnichannel retail environment from the retailer and customer perspective would also be interesting. Further studies could simultaneously collect data from customers and retailers to explore the different perceived values and quality of our proposed constructs.

Future studies could extend our study by examining the influential factors of customer returns intention in each channel offered by an omnichannel retailer. Our study only examined BORIS, but future studies could cast a broader net to collect data on customers' usage across different returns channels.

Although the previously mentioned limitations need to be addressed in future research, they do not discredit our findings. Instead, the results presented here serve as a foundation for research on reverse logistics transparency in retailer-customer relationship management. A customer shopping at omnichannel retailers needs to decide which retailer to choose as in the traditional shopping environment and needs to decide which channel to choose? Our study did not examine the common factors on customer channel selection. Future research is needed to fully

understand these factors and identify potential maturation paths followed by omnichannel retailers in pursuit of an optimal omnichannel returns management strategy.

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Appendix A: Experimental design

Background information and experimental manipulation

The scenario of the different returns process. 3 Treatments: (transparent returns policy, transparent loyalty program, Frontline employee Capability)

Below are background details about our case study. Please read the description carefully.

Today is Saturday morning. You wake up to organize your home, then you find that the cloth you purchased online (from your favorite brand) a few days ago did not meet your expectations (return reason code defined, exogenous variable?). It is hard to find a box to fit this item in, and your printer is down to print out the shipping label. As you know, there is a physical store near you, and you decide to return the product at the brick-and-mortar store to skip the process of packaging and taping.

You walk into the store; the representative greets you warmly and checks if you need assistance. You tell them you came in for an online product return, and then the representative leads you to the return counter. When you get there, the associate firstly appreciates you shopping with them and actively checks your information and returned products to help you. The associate looks up the available inventory and asks if you'd like to exchange the product or refund. (high level)/ you walk into the store and can't see any associates available to help. Following the signage at the store, you finally find out where the return counter is. You notice the associate at the counter

is staring at the cellphone and giggling. After seeing you are right in line. The associate asks you how to help you. You tell them you come here for an online product return. The representative does not answer you and directly takes the returned product. The associate doesn't mention any options of exchange or refund. **(low level) (Frontline Employee Capability).** **(add a description of associate service effectiveness, interaction effectiveness, friendliness, attitudes)**

When processing the returns, you can get the loyalty program info in simple words and see your loyalty member information on a computer in a few seconds. You can also see whether your product is qualified for return from your loyalty program purchase history. You can easily track the receipt and your loyalty status, rewards points, and whether the discount voucher available for the next purchase. **(High level)** / you can NOT see any loyalty program information around the counter and have to check with the associate again. Moreover, you are not provided with your loyalty program-related information, your purchase history, e-receipt, and rewards points in the whole returns process **(low level) (Transparent Loyalty program Policy).**

When you are waiting for processing, you see the returns policy posted on the wall, the front counter, which states what products can justify an acceptable return in simple words. You have been told how far you are away from the return deadline for this product. Finally, you are told the time frame to the refund and provide the tracking information **(high level)** / you do NOT see any information about the company's returns policy around the counter or on the wall, in the whole returns process, you are not provided with the returns policy and how your products qualify for returns. When it is done, you are told the return has been processed, and you are free to go. You are not given the time frame of the refund and tracking information. **(Low Level) (Transparent Returns policy).**

Appendix B: Summary of Existing Scales

Frontline service employee construct

Reference	Definition	Measurement
Ellinger et al, 2008	Frontline service Employee: individuals that interact directly with upstream and downstream customers in business-to-business contexts, like inside salespeople, repair, installation, and maintenance personnel, delivery truck drivers and in the current context, customer service agents with large logistics service provider firms.	(service-related Formal training) At my company, customer service contact employees... <ol style="list-style-type: none"> 1. Have formal training on how to serve the customer better 2. are formal trained to answer customer's questions 3. Have formally training to deal with customer complaints 4. Have formal training on resolving customer problems 5. Receive extensive formal training before they come into contact with customers **adapted from Boshoff & Allen, 2000
Ekinci 2008,2001	Suggest SERVQUAL with two dimensions: physical quality and staff behavior.	Four items related to staff behavior <ol style="list-style-type: none"> 1. Staff recognized you 2. Staff seemed to anticipate what I wanted 3. Staff were really good when they displayed effortless expertise 4. Staff were helpful and friendly 5. The staff listened to me
Vesel & Zabkar, 2009	Personal interaction quality: in the retailing encounters, personal interaction with sales personnel is important for delivering functional quality.	 <ol style="list-style-type: none"> 1. Employees of this retailer have the knowledge to answer customer's questions. 2. The behavior of this retailer's employees instills confidence in customers 3. Employees of this retailer are never too busy to respond to customer's request 4. Employees of this retailer give customers individual attention
Murali, 2016	SERVQUAL-dimensions based on ASS attributes	 <ol style="list-style-type: none"> 1. Accessibility of service people 2. Easiness to contact service people 3. Understanding the needs of customers 4. Handling of the customers 5. The professionalism of service people 6. Interpersonal behavior of service people ** adapted from Parasuraman, 1985m Pakdil et al., 2012

Francioni et al., 2018	Store atmosphere includes order and cleanliness of the store, layout and display, courteousness and professionalism of the staff.	<ol style="list-style-type: none"> 1. The store is orderly and clean 2. Store's layout and display (mean value of three items) 3. Courteousness and professionalism of the staff (mean value of four items) <ol style="list-style-type: none"> a. The personnel are helpful and friendly b. There are enough employees in the store to service customers c. The personnel are well informed d. The cashiers are well informed <p>**adapted from Turley and Milliamn (2000), Martinez-Ruiz at al.(2011), Koo and Kim (2013)</p>
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Transparent Loyalty program construct literature review

Reference	Definition	Measurement
O'Brien & Jones, 1995	The perception of loyalty program.	<ol style="list-style-type: none"> 1. The proposed rewards have high cash value 2. It is highly likely to get the proposed rewards 3. The proposed rewards are what significant wanted.
Liu, 2007	This research adopts Oliver's (1999, p.34) definition of consumer loyalty as" a deeply held commitment to rebuy or repatronize a preferred product/service consistently in the future". Four facets of loyalty, this paper focus on behavior loyalty.	Use continuous variables
Vesal & Zabkar, 2009	Loyalty program quality: loyalty programs should be designed in a transparent, uncomplicated way, every transaction needs to be rewarded and tied to the amount spent, and a plethora of redemption choices and rewards should be offered	<ol style="list-style-type: none"> 1. A good rewarding option of the loyalty program is a coupon that can be redeemed in every retailer store for buying nay product or service that retailer sells 2. Terms and conditions of loyalty program are transparent and can thus be easily comprehended 3. I think it is fair that the full value of purchase is recorded on the loyalty card regardless of the method of payment
So et al., 2015	Loyalty program value	Reward attractiveness Knowledge benefits Experiential benefit Group belongingness Disclosure comfort Required efforts

Hwang, 2019	Value-based fairness: the effect of perceived fairness/justice on loyalty is particularly manifest in a service recovery context, (Pan, et al., 2012 p.152)	<ol style="list-style-type: none"> 1. The rewards program offers reasonable cash value of the redemption rewards 2. The point value of the program is fair 3. The point 1 earn dollar are reasonable 4. The rewards program offer adequate reward varieties 5. The size of the rewards is adequate 6. I receive enough benefits based on how much money I spend with this casino 7. The reward program offer a reasonable amount of rewards 8. The rewards program offers adequate rewards <p>** adopted from Shulga & Tanford, 2018</p>
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Transparent returns policy literature pool

Reference	Definition	Measurement
Bonifield et al., (2010)	Measures for content analysis, include REM for the availability of refunds, exchanges, and merchandise credits, as well as restrictions imposed by the returns policy.	<ol style="list-style-type: none"> 1. Does the returns policy state that the merchant will issue a refund(credit card or cash) for: No merchandise / some merchandise / all merchandise 2. If yes, does the returns policy state that the merchant will issue merchandise credit for: (same as above) 3. If the returns policy makes a statement about exchanges, does the returns policy state that the merchant will make exchanges for: (same as above) <p>Restrictions imposed by the returns policy Does the merchant:</p> <ol style="list-style-type: none"> 1. Impose a time limit on returns? 2. Pay for all return shipping costs? 3. Charge restocking fee? 4. Refund original shipping and handling fee? 5. Provide the customer service contact information? 6. Require pre-authorization? 7. Include a pre-printed shipping label?
Pei et al. (2014)	Perceived Returns policy Fairness: fairness refers to consumers' assessment of whether a seller's	<ol style="list-style-type: none"> 1. PF1 fair 2. PF2 acceptable 3. PF3 satisfactory

	policy, price, or service is reasonable or justifiable.	
Janakiraman et al., (2016)	Typology of returns policy factors: meta-analysis leads to five dimensions	<ol style="list-style-type: none"> 1. Time leniency 2. Monetary leniency 3. Effort leniency 4. Scope leniency 5. Exchange leniency
Jeng (2017), experimental design	<p>Generous return policies refer to policies that facilitate returns not only by allowing refunds, exchanges, and merchandise credits but also by imposing minimal restrictions on these returns (Bonifield et al., 2010)</p> <p>The perceived value of the returns policy refers to a customer's assessment of the net benefit associated with a retailer's returns policy and process issue (Mollenkof et al.,2007)</p>	<p>Returns policy generosity, including duration and returns policy terms, I perceived return conditions stated in the returns policy to be...</p> <ol style="list-style-type: none"> 1. Short duration/ long duration 2. Limited/ unlimited 3. Inflexible/ flexible 4. Inconvenient/ Convenient <p>Perceived returns policy value: the returns policy is...</p> <ol style="list-style-type: none"> 1. not beneficial to me/ beneficial to me 2. worthless/ valuable 3. useless to me/ useful to me
Oghazi et al., (2018)	Perceived Returns policy Leniency: the principle of leniency captures the core of making an ethical judgment, in differentiating between what one considers just and what is unjust. online purchase returns policy leniency can influence online shoppers' purchase decision making via online shoppers' trust for an online vendor (no clear definition in the paper).	<ol style="list-style-type: none"> 1. The store promises a large return 2. The store identifies return using wider criteria 3. The store charges a reasonable return fee 4. The store promises an easy return mode <p>(adapted from Hsieh, 2013)</p>
Bonifield et al., (2017)	The leniency of returns policy: based on the characteristics of each e-tailer's returns policy,	<p>When compared to the typical returns policy for most internet business, this new returns policy is (has):</p> <ol style="list-style-type: none"> 1. Very lenient/ not at all lenient 2. Many restrictions/ few restrictions

Independent variable measurement

Table 11

Independent Variable & Associated Elements of Manipulation

Independent Variable	Key facets of manipulation
Retail reverse logistics capability (developed from 1-stage data analysis):	<p>At the retail store, do you agree with the following statement</p> <ol style="list-style-type: none"> 1. The speed of the in-store returns process is high (processing effectiveness consideration). 2. In-store returns are very easy (operation effectiveness consideration, adapted from Hsieh, 2013) 3. In-store returns are straightforward and simple (clear/ambiguous), (information communication effectiveness) 4. In store returns are effortless (credit processing effectiveness consideration) 5. In-store returns are comfortable to me (loyalty honor consideration)
Transparent Returns policy (track credit,etc)	<p>At the retail store, do you agree with the following statement</p> <p>(Strategic considerations) Visibility perspective</p> <ol style="list-style-type: none"> 1. The return policy is observable and clear to customers in store. 2. the returns policy state that the merchant will issue a refund (credit card or cash) for all merchandise (get a full refund on a product without the need to funnel credit into a lateral purchase) 3. The returns policy state that the merchant will initiate a return for all merchandise good conditions, even without a receipt. 4. the returns policy state that the merchant will make an exchange for all merchandise with good conditions <p>(Executive consideration) Traceability view</p> <ol style="list-style-type: none"> 1. The merchant provides the status of your credit refund time and track information. 2. the merchant provides the status of your return package information in the returns process 3. the merchant provides the customer with the exchange of the same product by tracking the inventory availability (no price discrepancy)
Transparent Loyalty Program:	<p>At the retail store, do you agree with the following statement</p> <p>(Strategic considerations) Visibility perspective</p> <ol style="list-style-type: none"> 1. the retailer provides clear club program rewards and promotion related to returns, (remain front and center demonstrate the value of LP) 2. the retailer provides clear information of Perks for shipping, returns, receipt storage 3. the retailer provides clear customer tier rewards and status level requirements 4. Terms and conditions of the loyalty program are transparent and can thus be easily comprehended (might be eliminated) <p>(Executive consideration) Traceability view</p>

	<ol style="list-style-type: none"> 1. the loyalty program returns rewards (coupon) can be redeemed in every retailer store. 2. The full value of the purchase is recorded on your loyalty account regardless of the method of payment 3. You can keep track of your loyalty tier in the process of return
<p>Frontline service employee capability (moderator)</p>	<p>At the retail store, customer service contact employees...</p> <ol style="list-style-type: none"> 1. Are accessible. 2. Have formal training on how to serve the customer better. 3. Are formal trained to answer customer's questions? 4. Have formally training to deal with customer complaints. 5. Have formal training on resolving customer problems.

Outcome Variable overview

Table 12
Outcome variables

Dependent variable	Key facets of measurement
In-store Buying Intentions (adapted from Weeney et al. 1999)	<ol style="list-style-type: none"> 1. I would strongly consider buying the items directly at the brick-and-mortar store (i.e., the store you just visited) (adapted from Weeney et al. 1999) 2. There is a strong likelihood that I would buy the item directly at the brick-and-mortar store (adapted from Weeney et al. 1999) 3. I am willing to make an effort to shop at this retailer (adapted from Li et al., 2018) 4. I feel loyalty toward this retailer. (adapted from Li et al., 2018)
Future buying Intention (adapted from Pizzi and Scarpi, 2013)	<ol style="list-style-type: none"> 1. I would be likely to consider this brick-and-mortar store for future purchase 2. The next time I need similar products, I would intend to buy them at this store 3. I would consider this store for future purchase
Negative Word of mouth	<ol style="list-style-type: none"> 1. Speak negatively about this retailer (especially return experience) 2. Bad-mouth this retailer to other people 3. Warn other people not to use this retailer as a return option or shop option.
Interest in Alternatives (Li et al., 2018)	<ol style="list-style-type: none"> 1. I would probably be happy with the products and services of another retailer 2. Compared to this retailer, there are other retailers with which I would probably be equally or more satisfied (especially return experience) 3. Compared to this retailer, there are many other retailers with whom I could be satisfied 4. If I need to change retailers, there are other good retailers to choose from.
Return Channel Loyalty	<ol style="list-style-type: none"> 1. Desire to choose return channel again 2. Encourage friends and family to choose this return channel 3. Encourage people to choose this return channel 4. Consider this return channel one of my top options 5. Would choose this channel in almost every situation 6. Would share my positive attitude about this return channel 7. Would return products using this channel in the future